

Sequence Listing

<110> Lightfoot, David

Meksem, Khalid

<120> ISOLATED POLYNUCLEOTIDES AND POLYPEPTIDES RELATING TO LOCI  
UNDERLYING RESISTANCE TO SOYBEAN CYST NEMATODE AND SOYBEAN SUDDEN DEATH  
SYNDROME AND METHODS EMPLOYING SAME

<130> 1268/4/2

<150> 60/178,811

<151> 2000-01-28

<160> 122

<170> PatentIn version 3.0

<210> 1

<211> 87

<212> DNA

<213> soybean

<400> 1

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87

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<212> DNA

<213> soybean

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92

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<212> DNA

<213> soybean

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gtatattagg aattc  
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113

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120

aactcaggta tcaatctaaa agcaacgctg ttcaccttga gctgaaacac ctggaggaga  
180

aagcaaagca aaccaaagc gagagagaaa taaagaacgg aaacagagag agagagagga  
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aggaccttgt tcaaagcaac ggggacaact ttagagccct ggcgcgcgtg ggggtcaata  
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agcgtaacct ggctgaggag agcctcggcg tcgtccttgc tgaagcagaa gaggaagagc  
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ttgacttgag agaactcagg tatcaatcta aaagcaacgc tgttcacctt gagctgaaac  
 180

acctggagga gaaagcaaag caaaccaaac gcgagagaga aataaagaac ggaaacagag  
 240

agagaggaag gaccttgttc aaagcaacgg ggacaacttt agagccctgg cgcgcgtggg  
 300

ggtcaataag cgtaacctgg ctgaggagag cctcggcgcc gtccttgctg aagcagaaga  
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 120

atccaacgtt tttcttgtag aatcagctgt gagaggggaa ttgg  
 164

gagtaaatga aaatcgatca aaatcaaata atatatgctt tttttagttg tgttcaagta  
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 actttttttt attgaaaaaa tcgacccaag ttgaaacaca tgtttgagaa ttgttttgtg  
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 gagtaaatga aaatcgatca aaatcaaata atatatgctt tttttagttg ggttcaagta  
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 240  
  
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 420  
  
 ctaactcaat cattttctct cacttttctt tctcttcaaa ataacaatct ttctggctcc  
 480

cttcctaact cttgggggtgg gaattccaag aatggcttct ttaggcttca aaatttgatc  
540

ctagatcata actttttcac tggtgacgtt cctgcttctt tgggtagctt aagagagctc  
600

aatgagattt cccttagtca taataagttt agtggagcta taccaaatga aataggaacc  
660

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720

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780

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840

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1020

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1080

ccatgtcttt cccaagctcc atcacaagga gtcattgccc cacctcctga agtgtcaaaa  
1140

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1380

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1440

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1560

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1800

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1860

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1920

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1980

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2160

ctacagtctt ggtgttatct tgtagaact cctaacgagg aaatcacctg ggggtgtctat  
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gaatggacta gatttgctc agtgggttgc ctcagttgtc aaagaggagt ggacaaatga  
2280

ggtttttgat gcagacttga tgagagatgc atccacagtt ggcgacgagt tgctaaacac  
2340

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2400

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2460

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2520

tatatatggt ctatgattct ttcatcttta tattattttt gcctgtttga atgcttgaat  
2580

ttgtacatac tcatactaca ataagggtga gttctgggta attttacctc tacctcaaag  
2640

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2700

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2760

cataaatgca ttatgaagaa ttgtaacggc tgtgtttttg gacttcttca aaaagtttat  
2820

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2880

tgtggggttg catgcatgag attggactag tgcgcttgat gtagtataaa atataaattg  
2940

tccaatcaag caccctctac atgtccaaat aatgggcctt atgaaactta attttttaat  
3000

tacaaactac agtaatcttt ttgaataaag atttaciaat tacaacngac atgtgaagcn  
3060

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<211> 830

<212> PRT

<213> soybean

<220>

<221> misc\_feature

<223> X is any amino acid

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Pro Trp Lys Gly Leu Arg Gly Arg Ile Thr Asp Lys Ile Gly Gln Leu  
35 40 45

Gln Gly Leu Arg Lys Leu Ser Leu His Asp Asn Gln Ile Gly Gly Ser  
50 55 60

Ile Pro Ser Thr Leu Gly Leu Leu Pro Asn Leu Arg Gly Val Gln Leu  
65 70 75 80

Phe Asn Asn Arg Leu Thr Gly Ser Ile Pro Leu Ser Leu Gly Phe Cys  
85 90 95

Pro Leu Leu Gln Ser Leu Asp Leu Ser Asn Asn Leu Leu Thr Gly Ala  
100 105 110

Ile Pro Tyr Ser Leu Ala Asn Ser Thr Lys Leu Tyr Trp Leu Asn Leu  
115 120 125

Ser Phe Asn Ser Phe Ser Gly Pro Leu Pro Ala Ser Leu Thr His Ser  
130 135 140

Phe Ser Leu Thr Phe Leu Ser Leu Gln Asn Asn Asn Leu Ser Gly Ser  
145 150 155 160

Leu	Pro	Asn	Ser	Trp	Gly	Gly	Asn	Ser	Lys	Asn	Gly	Phe	Phe	Arg	Leu	
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Gln	Asn	Leu	Ile	Leu	Asp	His	Asn	Phe	Phe	Thr	Gly	Asp	Val	Pro	Ala	
				180					185					190		
Ser	Leu	Gly	Ser	Leu	Arg	Glu	Leu	Asn	Glu	Ile	Ser	Leu	Ser	His	Asn	
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Lys	Phe	Ser	Gly	Ala	Ile	Pro	Asn	Glu	Ile	Gly	Thr	Leu	Ser	Arg	Leu	
				210					215					220		
Lys	Thr	Leu	Asp	Ile	Ser	Asn	Asn	Ala	Leu	Asn	Gly	Asn	Leu	Pro	Ala	
				225					230					235		
Thr	Leu	Ser	Asn	Leu	Ser	Ser	Leu	Thr	Leu	Leu	Asn	Ala	Glu	Asn	Asn	
				245					250					255		
Leu	Leu	Asp	Asn	Gln	Ile	Pro	Gln	Ser	Leu	Gly	Arg	Leu	Arg	Asn	Leu	
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Ser	Val	Leu	Ile	Leu	Ser	Arg	Asn	Gln	Phe	Ser	Gly	His	Ile	Pro	Ser	
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Ser	Ile	Ala	Asn	Ile	Ser	Ser	Leu	Arg	Gln	Leu	Asp	Leu	Ser	Leu	Asn	
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Asn	Phe	Ser	Gly	Glu	Ile	Pro	Val	Ser	Phe	Asp	Ser	Gln	Arg	Ser	Leu	
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Asn	Leu	Ser	Asn	Val	Ser	Tyr	Asn	Ser	Leu	Ser	Gly	Ser	Val	Pro	Pro	
				325					330					335		
Leu	Leu	Ala	Lys	Lys	Phe	Asn	Ser	Ser	Ser	Phe	Val	Gly	Asn	Ile	Gln	
				340					345					350		
Leu	Cys	Gly	Tyr	Ser	Pro	Ser	Thr	Pro	Cys	Leu	Ser	Gln	Ala	Pro	Ser	
				355					360					365		
Gln	Gly	Val	Ile	Ala	Pro	Pro	Pro	Glu	Val	Ser	Lys	His	His	His	His	
				370					375					380		
Arg	Lys	Leu	Ser	Thr	Lys	Asp	Ile	Ile	Leu	Ile	Val	Ala	Gly	Val	Leu	
				385					390					395		
Leu	Val	Val	Leu	Ile	Ile	Leu	Cys	Cys	Val	Leu	Leu	Phe	Cys	Leu	Ile	
				405					410					415		
Arg	Lys	Arg	Ser	Thr	Ser	Lys	Ala	Gly	Asn	Gly	Gln	Ala	Thr	Glu	Gly	
				420					425					430		
Arg	Ala	Ala	Thr	Met	Arg	Thr	Glu	Lys	Gly	Val	Pro	Pro	Val	Ala	Gly	
				435					440					445		
Gly	Asp	Val	Glu	Ala	Gly	Gly	Glu	Ala	Gly	Gly	Lys	Leu	Val	His	Phe	
				450					455					460		



Asp	Gly	Pro	Met	Ala	Phe	Thr	Ala	Asp	Asp	Leu	Leu	Cys	Ala	Thr	Ala	465	470	475	480
Glu	Ile	Met	Gly	Lys	Ser	Thr	Tyr	Gly	Thr	Val	Tyr	Lys	Ala	Ile	Leu	485	490		495
Glu	Asp	Gly	Ser	Gln	Val	Ala	Val	Lys	Arg	Leu	Arg	Glu	Lys	Ile	Thr	500	505		510
Lys	Gly	His	Arg	Glu	Phe	Glu	Ser	Glu	Val	Ser	Val	Leu	Gly	Lys	Ile	515	520		525
Arg	His	Pro	Asn	Gly	Leu	Ala	Leu	Arg	Ala	Tyr	Tyr	Leu	Gly	Pro	Lys	530	535		540
Gly	Glu	Lys	Leu	Leu	Val	Phe	Asp	Tyr	Met	Ser	Lys	Gly	Gly	Leu	Leu	545	550	555	560
Leu	Phe	Tyr	Met	Glu	Gly	Ser	Cys	Ala	Gly	Ser	Phe	Ile	Lys	Val	Leu	565	570		575
Cys	Val	Leu	Val	Phe	Asn	Tyr	Asn	Leu	Glu	Phe	Tyr	Leu	Ser	Asn	Leu	580	585		590
Tyr	Asn	Ser	Asn	Arg	Arg	Thr	Val	Gln	Thr	Lys	Thr	Pro	Lys	Glu	Gln	595	600		605
His	Leu	Xaa	Phe	Asn	Ile	Pro	Tyr	Gln	Xaa	Ser	Glu	Ile	Phe	Ser	Trp	610	615		620
Ser	Ser	Xaa	Cys	Arg	Gly	Asn	Xaa	Thr	Phe	Ile	Ile	Gly	His	Lys	Met	625	630	635	640
Lys	Ile	Xaa	Gln	Asp	Leu	Ala	Val	Ala	Cys	Ser	Pro	Ser	Phe	Pro	Glu	645	650		655
Thr	Ser	Tyr	Met	Asp	Leu	Xaa	Ser	Ser	Asn	Val	Cys	Xaa	Xaa	Asn	Xaa	660	665		670
Met	Leu	Lys	Leu	Gln	Phe	Trp	Ser	Phe	Ser	Val	Asp	Val	Asn	Cys	Cys	675	680		685
Xaa	Phe	Gln	Arg	Asp	Ser	Tyr	Ser	Trp	Ser	Ile	Gly	Ile	Pro	Gly	Thr	690	695	700	
Xaa	Ala	Leu	Lys	Ala	Gln	Glu	Ser	Lys	His	Xaa	Asn	Xaa	Tyr	Leu	Gln	705	710	715	720
Ser	Trp	Cys	Tyr	Leu	Val	Arg	Thr	Pro	Asn	Glu	Glu	Ile	Thr	Trp	Gly	725	730		735
Val	Tyr	Glu	Trp	Thr	Arg	Phe	Ala	Ser	Val	Gly	Cys	Leu	Ser	Cys	Gln	740	745		750
Arg	Gly	Val	Asp	Lys	Xaa	Gly	Phe	Xaa	Cys	Arg	Leu	Asp	Glu	Arg	Cys	755	760		765

Ile His Ser Trp Arg Arg Val Ala Lys His Val Glu Ala Arg Phe Ala  
 770 775 780

Leu Cys Xaa Ser Phe Ser Ile Ser Thr Thr Arg Ser Ser Ser Ser Ser  
 785 790 795 800

Pro Ala Ala Gly Arg Asp Xaa Thr Arg Glu Ile Ser His Ser Gln Ser  
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His Leu Pro Gly Arg Pro Leu Glu Pro Tyr Ser Glu Ser Tyr  
 820 825 830

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 120

caagtttcag gacaagtaat gcagaattat ggaaaagcaa tctgactaag acaaaagagc  
 180

ttcagagatt aacagaaaat agtgagccag aaaaaagatt gcgagacaga aattgggtcgc  
 240

caacaaaaag ttgtctcttt tataattttt aattgaaatt ttcttaattt agctaacatg  
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acttctctacg gccacaattg cgtttgcaga cacttaaaaa acttgatggt gcagcaaaaa  
 360

tcacgtttta tttattattg atgtcaatta ttaacagtt ttatgtagg ttaataaaca  
 420

gtaggttgat gcaagaggct aaacattaat cagaaattga aaggcagggn tattacttct  
 480

tatccatata ctgattgagc gggctctgaa gaatagcggg aaaaacttca agcgccagag  
 540

acaatagttt tttcttttca aacagcgcct atgcaaattc ttccaatctc aagcttcaat  
 600

tcctatcgtc tcgaaccgga cttgntctgn ttnacctaaa tccccactcg gcattnatna  
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720

naatct  
726

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<213> soybean  
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<221> partial\_cDNA  
<222> (1)..(648)  
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gctcagggac aggttattgt gatccagctt ccttgggaagg gtttgagggg tcgaatcacc  
120

gacaaaattg gccaaacttca aggcctcagg aagcttagtc ttcattgataa ccaaattggg  
180

ggttcaatcc cttcaacttt gggacttctt cccaacctta gaggggttca gttattcaac  
240

aataggetta caggttccat acctctttct ttaggtttct gccctttgct tcagtctctt  
300

gacctcagca acaacttgct cacaggagca atcccttata gtcttgctaa ttccactaag  
360

ctttattggc ttaacttgag tttcaactcc ttctctgggc ctttaccagc tagcctaact  
420

cactcatttt ctctcacttt tctttctctt caaaataaca atctttctgg ctcccttctt  
480

aactcttggg gtgggaattc caagaatggc ttcttttaggc ttcaaaattt gatcctagat  
540

cataactttt tcaacttgga cgttcctgct tctttgggta gcttaagaga gctcaatgag  
600

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<222> (1)..(558)

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 120

accacaaaa atgggcaact tnaaagnctc angaagctta atcttnatga aaacccaaaat  
 180

gggggggtcaa anccntcaac ttttggactt ctttccaacc ttagaggggg tcaattattc  
 240

aacaataggn ttacagggtc catacctctt tctttaaggt tctgcccttt gnttcagnct  
 300

cttgacctca acaacaactt gctnacagga agcaatccct tatagtcttg ctaattccac  
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taagctttat tggcttaact ttgagnttca actnctttct ntgggncttt accaactagn  
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ctaactcact cattttctct cacttttttt tntnttttaa aaaacaaaca tttntngntt  
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<212> DNA

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aagtgtgctc agggacaggt tattgtgatc cagcttcctt ggaagggttt gaggggtcga  
 120

atcaccgaca aaattggcca acttcaaggc ctcaggaagc ttagtcttca tgataaccaa  
 180

attggtgggt caatcccttc aactttggga cttcttccca accttagagg ggttcagtta  
 240

ttcaacaata ggcttacagg ttccatacct ctttcttttag gtttctgccc tttgcttcag  
 300

tctcttgacc tcagcaacaa cttgctcaca ggagcaatcc cttatagtct tgctaattcc  
360

actaagcttt attggcttaa cttgagtttc aactccttct ctggccttta ccagctagcc  
420

taactcactc attttctctc acttttcttt ctcttcaaaa taacaatctt tctggctccc  
480

ttcctaactc ttggggnggg aatttcaaga atggcttctt taggcttcaa aatttgatcc  
540

tagatcataa cttttttnctg gtgacgttcc tgcttctttg ggtagcttaa gagagccna  
600

tgagaattcc cttagtcatn ataagnttag tggagcttcc caantgaaat anggaccct  
660

tntaggetta aacactngnc attctaataa tgcttgaat gggaacctcc ctgttccctc  
720

tttanttac tcccttnenc ngctggangc cagaccacn cntgncaatn aatccctcaa  
780

agttaggtac atcg  
794

<210> 19

<211> 781

<212> DNA

<213> soybean

<220>

<221> partial\_cds

<222> (1)..(781)

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 19

ggaggagtgg gaaagacagt ggctatggag cttgttccgg aggttgggtt ggaatcaagt  
60

gtgctcaggg acaggttatt gtgatccagc ttcottggaa ggggtttgag gggtcgaatc  
120

accgacaaaa ttggccaact tcaaggcctc aggaagctta gtcttcatga taaccaaatt  
180

ggtgggtcaat ccttcaact ttgggacttc ttccaacctt agaggggttc aagttattca  
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acaataggct tacaggttcc atacctcttt ctttaggttt ctgccctttg cttcaagtct  
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cttgacctca gcaacaactt gctcacagga gcaatccctt atagtcttgc taattccact  
360

aagctttatt ggcttaactt gagtttcaac tnccttctctg gncctttacc agctagccta  
420

actcaactcat tttctctcac ttttctttct cttcaaaaaa acaaactttc tgggtccttt  
480

ctactcttgg ggggggaatt ccagaatggn ttcttttaggg ttnaaaattg atcctagaca  
540

tactttttac tggggacgtc ctgcttcttt ggnagcttaa agagctcaat gagattncct  
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tagcataata agttaggggg gctttnccaa agnaatagga ncctttntag ggttaaaaac  
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ctggcatttt taaaatgcct tgaangggac ttgnccgctn cccctntaat tatccncctt  
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acnccgntgg anggagagaa aancccttg caaanaaaac cctcaaaggt tagggngatc  
780

g  
781

<210> 20

<211> 861

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 20

gaatgggagg agtgggaaag acagtggcta tggagcttgt tccggagggt gggttggaat  
60

caagtgtgct cagggacagg ttattgtgat ccagcttcct tggaagggtt tgaggggtcg  
120

aatcacccgac aaaattggcc aacttcaagg cctcaggaag cttagtcttc atgataacca  
180

aattggtggt tcaatccctt caactttggg acttcttccc aaccttagag gggttcagtt  
240

attcaacaat aggcttacag gttccatacc tctttcttta ggtttctgcc ctttgcttca  
300

gtctcttgac ctcagcaaca acttgctcac aggagcaatc ccttatagtc ttgctaattc  
360

cactaagctt tattggctta acttgagttt caactccttc tctggtcctt taccagctag  
420

cctaactcac tcattttctc tcacttttct ttctcttcaa aataacaatc tttctggctc  
480

ccttcctaac tcttgggggtg ggaattccaa gaatggcttc ttaggcttc aaaatttgat  
540

cctagatcat aactttttca ctggtgacgt tcttgcttct ttgggtagct taagagagct  
600

caatgagatt tcccttagtc ataataaagt ttaatggagc tataccaaat gaaataggaa  
660

ccctttctan gcttaaacac ttgacatttn taataatgnc ttgaatggga acttgctgc  
720

tacctctnt aattatcctn cttacactgn tgaatgcaaa aaacaacctc ttgcaataaa  
780

tcccttaaan ttangnnaat gggaaanttn tttntgattt gagtnaaacc aattaatggc  
840

atattnttta acatttaaan t  
861

<210> 21

<211> 761

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 21

gaatgggagg agtgggaaag acatgggggt gaagggtgt acccacatag ttgaatattt  
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cccacaaatg agcttgagtt aaatttcttg gcaagcagag gggggacaga acctgagagg  
120

ctattgtagg aaacattgaa gggatttaga ctgcgctgac tgtcaaagga gactggaatt  
180

tctccactga aattattcag tgacaaatca agctgcctaa gcgaggaaat gtttgcaatg  
240

cttgaaggaa tatgtccact aaattgggtt ctactcaaaa tcagaacaga aagattacgc  
300

aatctaccta aactttgagg gatttgattg tcaaggaggt tgttctctgc attcagcagt  
360

gtaagtgagg ataaattaga gagggtagca ggcaagttcc cattcaaggc attattagaa  
420

atgtcaagtg tcttaagcct anaaagggtt cctatttcat ttggtatagc tcctaaact  
480

tattatgact aagggaatc tnattgagct cntttaactc ccaaagaaca ggacgtncca  
540

gtgaaaaagt atnatctagg atcaaatttg aacctaataaa gcattttgga tccccccaaa  
600

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gtaggaagga gcanaagatg tntttnaaaa anaaatanaa aatatagtag tactgtaagc  
660

naaaagggtga ctaatagcat aantatgata caaattagga tttcttanaa ttttttnnaa  
720

aatnnnangn aaccaaaaaa gngacntncn tttnaanacc c  
761

<210> 22

<211> 856

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 22

aatgggagga gtgggaaaga cagtggctat ggagcttggt ccggaggttg ggttggaatc  
60

aagtgtgctc agggacaggt tattgtgac cagcttcctt ggaagggttt gaggggtcga  
120

atcaccgaca aaattggcca acttcaaggc ctcaggaagc ttagtcttca tgataaccaa  
180

attggtgggt caatcccttc aactttggga cttcttccca accttagagg ggttcagtta  
240

ttcaacaata ggcttacagg ttccatacct ctttctttag gtttctgcct ttgcttcaag  
300

tctcttgacc tcagcaacaa cttgctcaca ggagcaatcc cttatagtct tgctaattcc  
360

actaagcttt attggcttaa cttgagtttc aactccttct ctggtccttt accagctagc  
420

ctaactcact catTTTTctt cacttttctt tctcttcaaa anaacaatct ttctggctcc  
480

cttcctaact cttgggggtg gaattccaag aatggcttct ttaggcttca aaaattgac  
540

ctagaacata acttttttac tggtgacgtt cctgcttttt ttggtaggct taaaganaag  
600

ccaatgagaa tttccttagt catnataaag ttaaggggag cttttnccaa atgaaaaaag  
660

gaaccctttn taggcttaaa nanacttgac aattntaat aatgcccttg aatngggaac  
720

ttgctgcta cccctttaa tttatctac ttacctgnt ngaaggcaaa naacaacccc  
780



tttgcaataa aaaccnaaa gttaagggga angnggnact ttntntctnn tttngggnaa  
840

accanttann ggcnc  
856

<210> 23  
<211> 826  
<212> DNA  
<213> soybean  
<220>  
<221> misc\_feature  
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
<400> 23  
gaatgggagg agtgggaaag acatgggggtt gaagggctgt acccacatag ttgaatattt  
60

cccacaaatg agcttgagtt aaatttcttg gcaagcagag gggggacaga acctgagagg  
120

ctattgtagg aaacattgaa gggatttaga ctgcgctgac tgtcaaagga gactggaatt  
180

tctccactga aattattcag tgacaaatca agctgcctaa gcgaggaaat gtttgcaatg  
240

cttgaaggaa tatgtccact aaattggttt ctactcaaaa tcagaacaga aagattacgc  
300

aatctaccta aactttgagg gatttgattg tcaaggaggt tggtctctgc attcagcagt  
360

gtaagtgagg ataaattaga gagggtagca ggcaagttcc cattcaaggc attattagaa  
420

atgtcaagtg tcttaagcct agaaagggtt cctatttcat ttggtatagc ttcactaaac  
480

ttattatgac taanggaaat ctattgagc tctcttaagc tacccaaaga agcaggaacc  
540

gtcaccagtg aaaaaagtta tgatctagga tcaaattttg aacctaaaaa accattcttg  
600

gaattccacc ccaagaatta ggaagggagc canaaagatt gttattttga aaaaaaaga  
660

aaagtgagaa aaaatgagtg agttaggctt actggtaaaa ggaccaaaaa aaggantttg  
720

aaactnaaan ttaanccaat aaaacttaat ggnaataaca aanactttta nggaattctc  
780

ttttnaacaa attnttntct angncaaaaa anttaancaa aggnct  
826

<210> 24  
 <211> 571  
 <212> DNA  
 <213> soybean  
 <220>  
 <221> misc\_feature  
 <223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
 <400> 24  
 tgggactggc tgtgactgat ctctctgggc taatctcttc cagctgctgg agaacttgat  
 60

gaacttctgg tcgtgctgat ggagaaggat caacacagtg caaagcgagc ttcaacgtgt  
 120

ttagcaactc gtcgccaact gtggatgcat ctctcatcaa gtctgcatca aaaacctcat  
 180

ttgtccactc ctctttgaca actgaggcaa cccactgagg caaatctagt ccattcatag  
 240

acaccccagg tgatttcctc gttaggagtt ctaacaagat aacaccaaga ctgtagatat  
 300

cagttttagt gtttgctttc ttgagctttg agagctcagg tgcccgggat cccaatgctt  
 360

cagctgtagc tatcacgttg gaattagcag cagttgacat caaccgagaa agacccaaaat  
 420

ctgcaatttt agcatttgna ttctcattaa acaacacaat gntggatgng anggtncat  
 480

ggatgaaggt cttctnggna agnaagnaaa acaaagcacc gggccaaggn ttgggcta  
 540

ttcaaccttg gggggcaaac naanaaatgt t  
 571

<210> 25  
 <211> 727  
 <212> DNA  
 <213> soybean  
 <220>  
 <221> misc\_feature  
 <223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
 <400> 25  
 ttacaactag tggtatcgga gaatgaaaaa ttgaagaata ataagttcag ctataataaa  
 60

ctcgaggagg gaaaaacaaa gaaattcatg ataaatagat ataacttatt aaatttaagg  
 120

ggtgtatttg cacaccctga attatagaga ttcttatatc tttgagaaaa taatttaaatt  
 180

gggaaaaaag agataatgac tgattgagat ttgcctcaga attgttcggt ttaatatagg  
240

tacgaatcta atggttttat cctgaaagat gtcacaagt attgagggac taataaattg  
300

tttataaact actactaaat gagatgagac ttttaagggtg actgaagcaa tatcatttaa  
360

aaaatgacta ctcgattttg tgttgagaaa atttattttc aatgaaaaga aaatatatac  
420

atataagata aagtaattaa cataaccgaa aggaaataaa atgcaacatt ataaaaacta  
480

caactatata aatgatatat acaactccta gcacatgcat tggattgtga attaattaaa  
540

atgttgtatg gatggtaaaa attcaaaact aaacccccca caatttaagt gacacagaat  
600

ataattagcg gtggtotttt tacagaaacg acgagaacaa aggtgtcaaa ggaaaggaga  
660

tggatgcatg tggatgagc tcatncaatt ccaacctgtt gtggacccaa gccgaagtcc  
720

ttgacnn  
727

<210> 26

<211> 560

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 26

attacgcnag ctctatacga ctactatag ggagacaagc ttgcatgcct gcaggctcgac  
60

tctagaggat ccccggttac cgagctcgaa ttcccaatgc cagagcttcc ctatcgtggg  
120

ccccacctat gaagaataca cccacgttga aatacatgtt gttgttggtg gacgcgcccc  
180

gccgagagtg ccggtccacg agtatcccca acgtgcatgg cgcattgcgt tgaaacctag  
240

tattcatctt cctgatggag gcagccacgt gtccgacaag gtcaatgttg ccgttttcgt  
300

gaaaagggat gataatgaaa ggcaccatat tgtcttgggc gaggttgaaa atggcgtcgt  
360

gcattgctctt gtaaggtgcc acgttgatgt agggaagaac cttgactggc ccacttgagt  
420

tgttgaggta gttttcgaag gcttgcatga tgtgggttggg gttggggtaa ttcacagaca  
480

agaattttct gngaccctg tctatgtttt atgggaagga gaatgggtgc cttttcccca  
540

cnagctngat nagngggact  
560

<210> 27

<211> 630

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 27

actgcatgca tgcaagcaaa tttaacttta cacaacacac caccagagtg taagctgttt  
60

cataaaaaat gattgtttcg ggctttcgga tcacaaggct tgtttagtat tcggtaagaa  
120

agaaagaaat aggtgataaa taaagtggat agaaacataa aagaaaggaa taaagtaatg  
180

aaaataaggg agaagtagaa taatggaaat agataagaaa tagaatggat tcgatagtat  
240

atctagttta agagaaataa gaaaaaataa gaacaagaaa aaaaattgca ttttaattta  
300

ttatttgtac tgtatcgatg attggcacga gattataagt ttttttttgc gtgtttaccg  
360

ttgaaggatt atatatcata ccatttgttt gtcaaccaac acggaacttt aagtctcttg  
420

atgttcaaaa gcacttaaaa ctaaggaatt ttacatcata ttagtcgtct gtagactgat  
480

acaggatttt aagcctatat atctagcatt gatccggttg gcaatcaata tcacattaat  
540

gatcggtaaa ccattcatat aacccttttg attgggtcaag aaatggcttt atgaatccca  
600

ggattgagcc cagaancagg ngatactagn  
630

<210> 28  
 <211> 756  
 <212> DNA  
 <213> soybean  
 <220>  
 <221> misc\_feature  
 <223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
 <400> 28  
 attggcttaa cttgagtttc aactccttct ctggctcttt accagctagc ctaactcact  
 60  
  
 cattttctct cacttttctt tctcttcaaa ataacaatct ttntggctcc cttnctaact  
 120  
  
 gtgggggggg gaatancaag ggnggcttta ggctgcaaaa tttgatccta gatcataact  
 180  
  
 ttttcactgg tgacgttcct gcttctttgg gtagcttaag agagctcaat gagatttccc  
 240  
  
 ttagtcataa taagtttagt ggagctatac caaatgaaat aggaaccctt tctaggctta  
 300  
  
 agacacttga cattttctaataatgccttga atgggaactt gcctgctacc ctctctaatt  
 360  
  
 tatcctcact tacactgctg aatgcagaga acaacctcct tgacaatcaa atccctcaaa  
 420  
  
 gtttaggtag attgcgtagt ctttctgtt ccgattttga gtagaaacca atttagtgga  
 480  
  
 catattcctt caagcatngc nnacatttcc tcgcttaggc agcttgattg tcaactgaata  
 540  
  
 atttcaggtg gagaaattnc agtctncttt gacagtcagc gcagtctaaa tcttcttcaa  
 600  
  
 tggtttctac aataggcctc tcagggtctg gcccccttt gnttggccaa ggaaanttaa  
 660  
  
 cttaaagctta tttggngggg aaanattcaa ctatgggggg acncggccct ttaaacccca  
 720  
  
 gggnttttcc caggttcctt ccaaggnggc anttgt  
 756

<210> 29  
 <211> 566  
 <212> DNA  
 <213> soybean  
 <220>  
 <221> misc\_feature  
 <223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
 <400> 29

gacccttggt ctatagaacc gaattcgagc tcggtaccgc gggatcctct agagtcgacc  
60

tgcaggcatg caagcttatt attactacta ctacttatct tcaactccacc aactgtgtc  
120

actaaaaccg gaaccatccc catacaaaat tctactgaag acaacatatt cccaatatt  
180

cccaatgcat cagcgttctc catgaaagtt gtcatttctt ttccattcaa agatccatca  
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ttgtggcgcc ttcccaccat cacaagatca tagtttctt ccaaactatg cactgcttc  
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aacacctcca ccccatcgtc caccgtaatc tcgtaccaac aaacggtacc aatgccatat  
360

ttcatgctct tgaactcgtc aattaacccc tcgtccaaca tggatatctc ctcttctct  
420

tcacgctctt ctcttgcaaa ataattttac aaccacacgg tttcttggtc acgataacaa  
480

acctaataaa gctaccctcg tatctgcacg ctccgcattc gaattcccaa tgccagagct  
540

tccttatcgg gggccccacc tatgaa  
566

<210> 30

<211> 673

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 30

gggactggct gtgactgatc tctctggtct aatctcttcc agctgctgga gaacttgatg  
60

aacttctggt cgtgctgatg gagaaggatc aacacagtgc aaagcgagct tcaacgtggt  
120

tagcaactcg tcgccaactg tggatgcac tctcatcaag tctgcatcaa aaacctcatt  
180

tgtccactcc tctttgacaa ctgaggcaac ccaactgaggc aaatctagtc cattcataga  
240

caccccaggt gatttctctg ttaggagttc taacaagata acaccaagac tgtagatatc  
300

agtttttagtg tttgctttct tgagcttttg agaagctcag gtgcccggta tcccaaagtc  
360

ttccagctgt agcttatcac cgttgggaat taagcagcaa gttggacatt caacc'cgag  
420

naaaagaccc aaaaat'tttg caaat'tttta agcaatttng gnant'tcttn aatcaaggcc  
480

aaccaccaat tggnttg'gga atggtggaag gg'tttcccca atggtaattg gaagggt'ttc  
540

ttccctn'ggg gaaaatggaa aggggcaana aaacaaaggc ccaacngggg ccccaaagg't  
600

nttttggggg ccttatt'ttt tncnaatncc c'ttgg'nngg ggncccaa'at tcnaaantgg  
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aaattggntt tnn  
673

<210> 31

<211> 736

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 31

gttgnntagn tgcactatag aatncgaatt caatt'taaac at'tt'taatt t'tt'gtct'tt  
60

gtattctatt t'tt'cataaa ttcta'atctt gctaataatt tcaattcata ttaagatcgg  
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taaatagaaa atctagaaaa aaaaacaaaa aaagtat'ttt t'tt'tcattg at'tt'tat'tt  
180

caattgattt gtcactaaca aactgattcc tct'taaatct cacaaaagta catgtc'gata  
240

taaatatgag attataa'att catgatatct at'tt'tcgatt t'tt'acatata atgt'tt'tt't  
300

tatct'tt'tt't agttccta'at aagcatt'ttt aaatgtct'ta tgttcctact ttgcatatca  
360

gggacc'catt aatgggacga ggtcactg'cg agcatgaaca acgtgtct'tt cgtctcccga  
420

acaacgtgcc atcttgcagg ctcaccac'ct cggaatcc'ct ggagtgg'tca c'cactgattt  
480

tccggggaaa gcccgccggt gaaagt'ttga ttacaccggc aatgtgagcc ggtc'gctg'tg  
540

gcaaccctgg tnccgggaca aangcacacc aag'tt'gnaan t'ttgggtccg aggggngcca  
600

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naattggggt tgcanggata ctaagcnntt ggnnacttnc ctgggnaacc caccctaata  
660

nccatntttc aatgggggnac cnaatttctt acaattggnt gcaananggg nttttngggg  
720

aaccttttna ccccca  
736

<210> 32  
<211> 566  
<212> DNA  
<213> soybean  
<220>  
<221> misc\_feature  
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
<400> 32  
gaccnnagac gctactatag ggagacaagc tattcgaagg ggaactgaga acgatccaaa  
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gcactccaag aaacagagag tttcacattg tttgttgtgt acataatgaa gcaaactgtg  
120

gtggcatcac tgccttatta gaagagtgc acccagtgc agagagcccc atatgcgtct  
180

acgcagtcca ccttatcgag ctctgtggga aaagtgcacc cattctcctt cccataaaac  
240

atagacacgg tcgcagaaaa ttcttgtctg tgaattaccc caacaccaac cacatcatgc  
300

aagccttcga aaactactcc aacaactcaa gtggggccagt caaggttctt ccctacatca  
360

acgtggcacc ttacaagagc atgcacgacg ccattttcaa cctcgcccaa gacaatatgg  
420

tgcctttcat tatcatccct tttcacgaaa acggcaacat tgaccttgtc ggacacgtgg  
480

ctgcctccat caggaagatg aatactaggt ttcaagcgca tgcgccatgc cgttggggat  
540

actcgnggcc ggnactctng gtgggn  
566

<210> 33  
<211> 614  
<212> DNA  
<213> soybean  
<220>  
<221> misc\_feature  
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
<400> 33



acaacaagca acgaacagct tttaacctta aactaggcaa atgccaatat taaacaacaa  
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ataattaaaa ttgtaaggct ggtcgagtat aaattaaaca aaaggccctc tattcaaacc  
120

ttcatatatc atacctgntt ttaattaacg cggactactt ttcatataa aaaaaagatc  
180

attagaggat taatttaaag cgnttttagtt tttaattacc aaagagtata attattatta  
240

ggcgcttttg cccacaatca atcacctaaa caagaaaaag aaaaagaaaa aaaaaggcaa  
300

attggactaa tgcaaaagtg gcacaatctt tgncttgaac tctttaatta gcaacaaatn  
360

atactcttct gcacaaatca caagaatacc ttacatgaaa agaattggnaa tntgacgggt  
420

tacattaaat tatatgcagg tttctgcagg gaatcaattn tcaagaattt aaggggggggt  
480

gggaattttc aatagctagc ttgactagca aagggaaga ataaaggnaa aangcttctt  
540

ggctnggcct tttggganng gnatcctttt ngctaaaccg gaaanggnta tangaatggg  
600

aaaggagana atcg  
614

<210> 34

<211> 602

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 34

aggctagctg gtaaaggacc agagaaggat ttgaaactca agttaagcca ataaagctta  
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gtggaattag caagactata agggattgct cctgtgagca agttgttgct gaggtcaaga  
120

gactgaagca aagggcagaa acctaaagaa agaggtatgg aacctgtaag cctattgttg  
180

aataactgaa cccctctaag gttgggaaga agtcccaaag ttgaagggat tgaaccacca  
240

atttggttat catgaagact aagcttcttg aggccttgaa gttggccaat tttggcggtg  
300

attcgacccc tcaaaccctt ccaaggaagc tggatcacia taacctgtcc ctgagcacac  
360

ttgattccaa cccaacctcc ggaacaagct ccatagccac tggcattcca gctcccgcaa  
420

gaacccttct ggatcagcca actcttgctt gaaagcttat cacatgtacc tctctacaga  
480

taggaggggtg cttcttccct ttcactggnc tacctcttcg ggaataagcc acctaagag  
540

aaagaaagan ctgggatagc taactctaca tagnctcaag gcnagagata attagggaaa  
600

ng  
602

<210> 35

<211> 644

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 35

ggaattttga agagaagtaa agtgagagaa aatgantgan nnaggctagc tggtaaagga  
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ccagagaagg atttgaaact caagttaagc caataaagct tagtggaatt agcaagacta  
120

taagggattg ctctgtgag caagttgttg ctgaggtcaa gagactgaag caaagggcag  
180

aaacctaaag aaagaggtat ggaacctgta agcctattgt tgaataactg aaccctctta  
240

aggttgggaa gaagtcccaa agttgaaggg attgaaccac caatttggtt atcatgaaga  
300

ctaagcttcc tgaggccttg aagttggcca attttggcgg tgattcgacc cctcaaacc  
360

ttccaaggaa gctggatcac aataacctgt cctgagcac acttgattcc aaccaacct  
420

ccggaacaag ctccatagcc actggcattc cagctccgc aagaacctt ctggatcagc  
480

caactcttgc ttgaaagctt atcacatgta cctctctaca gataggaggg tgcttcttcc  
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ctttactgg nctacctt cgggaataag ccacctaag agaaagaaag anctgggata  
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gctaactcta catagnctca aggcnaagaga taattaggga aang  
644

<210> 36  
<211> 748  
<212> DNA  
<213> soybean  
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<221> misc\_feature  
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<400> 36  
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cattttctct cacttttctt tctcttcaaa ataacaatct ttctggctcc cttcctaact  
120

cttggggtgg gaattccaag aatggcttct ttaggcttca aaatttgatc ctagatcata  
180

actttttcac tggtgacgtt cctgcttctt tgggtagctt aagagagctc aatgagattt  
240

cccttagtca taataagttt aatggagctg taccaaataa aataggaacc ctttctaggc  
300

ttaagacact tgacatttct aataatgcct tgaatgggaa cttgcctgct accctctcta  
360

atttatcttc acttacactg ctgaatgcag agaacaacct ccttgacaat caaatccctc  
420

aaagtttagg tagattgcgt aatctttctg ttctgatttt gggtagaaac caatttagtg  
480

gacatattcc ttcaagcatt gcaaacattt cctcgcttag gcagcttgat ttgcactgaa  
540

taatttcagt ggagaaattc cagtctcctt tgacagtcaa gcgcaagtct aaatctcttc  
600

aatgtttcct acaatagcct ctcanggtct gnccccctc tgcttgccaa gaaatttaac  
660

tcaagctcat ttgtgggaaa tattcaacta tgtgggacag nccttcaacc ccatgttttn  
720

ccaagcttca tacaaggagc atggccct  
748

<210> 37  
<211> 563  
<212> DNA  
<213> soybean  
<220>

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<221> misc_feature
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)
<400> 37
ctggctgtga ctgatctctc tggctctaac tcttccagct gctggagaac ttgatgaact
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tctggctcgtg ctgatggaga aggatcaaca cagtgc aaag cgagcttcaa cgtgttttagc
120

aactcgtcgc caactgtgga tgcattctctc atcaagtctg catcaaaaac ctcatttgc
180

cactcctctt tgacaactga ggcaaccac tgaggcaa at ctagtccatt catagacacc
240

ccaggtgatt tctcgttag gaggttctaac aagataacac caagactgta gatatcagtt
300

ttagtgtttg ctttcttgag ctttgagagc tcaggtgccc ggtatcccaa tgctccagct
360

gtagctatca cgttggaatt agcagcagtt gacatcaacc cgagaaagac caaaatctgc
420

aatttttagca tttgtattct catcaagcaa cacattgctg gatgtgaggt tcccatgtat
480

gatgttctcc tgggaatgaa ggcagaacaa gccacggcca agcttggtcta tttcatcctt
540

gtggccaatc aatgaatggt cat
563

<210> 38
<211> 623
<212> DNA
<213> soybean
<220>
<221> misc_feature
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)
<400> 38
gattttgcac atctacttga gtaggcttca catgattccg tgtattactt ttattttggt
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atatatacca tgtggagtat agtatcactt tttgtcctac aaccacattt tatgagactt
120

gcattttatg tgacatgaac ataaaaaata atgaaaaaga aaatgtcaca tatatatgat
180

acaatctttt taaaagtcaa tttgaataat ttttcatcag gaggaaaaag aagagagaaa
240

atgaattaag tttcttctaa aaattaaaat caacttataa aaagaaaaaa cttaaatgaa
300

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aaaaattcaa aaagaaaaag aataaaatga tcaatagcct ttaggttttaa gcacaagggtg  
360

aatccaaata aagaccccaa aagatagtagc agaaccacaac aatggtaaaa tctagaaata  
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tacatgtaaa gactgcattt atagaccatc atgactagca aatgcttaaa ggcacataga  
480

tgaattaatc tatgcaacaa aatctgnccc aagttttttt tangcaagga aaatcatatc  
540

attttattaa ggataactga gaggaccaat ggtgtaatca attgaaatca tgcgaggctt  
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acatgaaatc tgtcaccaag tac  
623

<210> 39

<211> 785

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 39

caattaggaa ataaatatat tgaaaagaat tggtagtcag ttcaatgaaa gtgaggctcct  
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caaacaactt gatgcagcan ctgtatgata caaaatatat taataactac accagcagaa  
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aaatataggt caatctatat ttgggaacca aataatattt aatttgtatc tgatagactc  
180

aagaaattat aactaatttg gaagaaatgg atacctagta ttattaaaac accaaaacac  
240

agggcagatt atagtagcta aagaggaaga agctaactag tcaaagtgtc acactattca  
300

acactacaaa ggaccaatcc ccttttagag agcctgacct ttctcaccca agagctaccc  
360

aagagaatac acaccctctc ctccatatcc cctcccatat aacacaatcc tcaccaacta  
420

agcacctacc tgacaattcc ctctaacca actctctgct catcagggtt gattctcttc  
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tctttccaag actttgggct tttgttttga ctaagccaaa tttctatctg ctggcctggt  
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ccaacagtat cttttacaga caagtttaca aaatatctgt atttgttaga atttattgat  
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attcctatta tgggtcccccac tgtgtgcaaa catttagaaa ctaatattac aattaacagt  
660

ttttggtgaa tgcagcaaaa ctaaataatat ttgatataga aatcaacaaa ctgaaaaatt  
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atatngcaag gncaattgga aaagaaaatt gataccctt ttgnggnaat aaatatantg  
780

nntac  
785

<210> 40

<211> 640

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 40

tggaaggcgt ccttcaattc aatcacaaag tctaaatcaa agacgagggg gctgaaatca  
60

tgggggacat tgacaacgta aggtaaccac taattaatta accactaata ttatcccatt  
120

aatatcccat taagagataa tacatataga gccataaat aagcatctta acaagacaaa  
180

taaattatcc attattcagc ttatgcccat ggtggtatta gaagtttagg aaaaaaaaaat  
240

tcatcatttg gcaatttttg gctcattagc ttgaattggt tacaagggtg ggtatggact  
300

tttttctttt cttttctcta aattcttcct tctatgatat acttttggtc aacttaaact  
360

caatttctta tagctcaata ttttggattt agattggaaa tatctaaaag nactttaat  
420

tttatattta caaaaaaaaaa aaaagcatcg ntctttttct ttttataaca aagggggatc  
480

aaaatcactc tttttatgaa tccgcattat ccttnataat aattaacctc cactgggatt  
540

taaaggnga ttaattaaat ccggaggcca tggaaggata tgggggaacc taatctaaaa  
600

ntncatcctc aaccctaang ggaaaataaa ggaatngggg  
640

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<210> 41
<211> 808
<212> DNA
<213> soybean
<220>
<221> misc_feature
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)
<400> 41
cttttgacac tatgaatacg aattcaaata ttaaataattt ttatTTTTTg tctttgtatt
60

ctatTTTTTc ataaattcta atnttgctaa taatttcaat tcatattaag atcggtaaatt
120

agaaaatcta gaaaaaaaaa caaaaaaagt atTTTTTTTT cattgatttt attttcaatt
180

gatttgtcac taacaaactg attcctctta aatctcacia aagtacatgt cgatataaat
240

atgagattat aaattcatga tatctatttt cgatTTTTTc atataatggt ttttttatct
300

tttttagttc ctaataagca tttttaaatg tcttatgttc ctactttgca tatcagggac
360

ccattaatgg gacgagggtc actgcgagca tgaacaacgt gtctttcgtt ctcccgaaca
420

acgtgtccat cttgcaggct caccacctcg gaatccctgg agtgttcacc actgattttc
480

cggggaagcc gccggtgaag tttgattaca ccggcaatgt gagccgttcg ctgtggcaac
540

ctgttccccg gacaaaggca cacaagttga agtttgggtc cgagggtgca gattgtgttg
600

caggatacta gcattgtcac tcctgagaac caccctatcc atcttcatgg gtgcattttc
660

acattgttgc agagggtttc gggaacttcg acccaaagaa agatccgcga aattcaacct
720

tggtggatcc cttttgaaaa acacagtggc tggcctgtaa atggatgggc aagtattcga
780

tttgggggct gataaccna gtaaatnt
808

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<210> 42
<211> 605
<212> DNA
<213> soybean
<220>
<221> misc_feature

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<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
 <400> 42  
 ctcccgggtc ccaagtaata ggcccctcag agccaaaaca ttggggggggc taatttttcc  
 60

tagaacactg actttctgatt caaattctct atgaccttta gtgatctttt ccctcaatct  
 120

ctttactgca acttgacttc catcctccaa aatagcctta taaacagntc catagggtgct  
 180

ctttcccatg atctcagctg gtgcacacaa gagatcatca gctgtaaaag ccattgggtcc  
 240

atcaaaatgg actagtttcc ctccagcctc cccacctgct tcaacatcac caccagcaac  
 300

tggagggact cttttttctg cctcatagtg gccgctctac cctcggtggc ttggccgntc  
 360

ccggccttag atgntgatct ctttctgatc aggcagaaaa gcaggacaca acaaagnata  
 420

atcaggacta cgaggagaac tcctgctact atgagaatta tgnctttggg gcttagcttc  
 480

ctatgatggg gatgggtnga cacttcanga gggggggcaa tgactccctg ggaggagct  
 540

tgggaaagac atgggggtga agnctgnac ccacataggn gaaaaattcc cacaaangag  
 600

cnngn  
 605

<210> 43

<211> 275

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 43

ctgaacggaa gtgactgcgt ttgtgtcggg tgtaagcagg gagtggaggc attataggct  
 60

tcggttttgc tctttactcc tttggcacga tggtgagaat gcttattgtg gtgattcggg  
 120

gatttgtatt cgagtatggc ggttgtagtg gtgtgtcga aggcagcgtt ttgggcggat  
 180

tggtagcac gcgccccat gtagtagcgg gaagggtggc ggtcnccggg gattaagacg  
 240



tcggcgggttt gcccggggcc cactatgagg acttt  
275

<210> 44  
<211> 632  
<212> DNA  
<213> soybean  
<220>  
<221> misc\_feature  
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
<400> 44  
tgtatataat taaaatgagt ttaatatatta tgtattaata gtataaaaatt tatcatatcat  
60

gatgaatggg gaaattttga attatgatta aataattata taaaaaaaatt tacatgatga  
120

atgaataact ttttttttct caattaaaat tatgatcctt tgtcgatatg ttttactgtg  
180

tgcacctttt ttttcggggg agagggggacc agtaggagaa gtagtattta gtataaagaag  
240

ggagagagaa gttgacttat cctttaatta gtttagagaa aattagacga gaaggaaaaa  
300

aaataggcga aagtcacttt ttcttttctat ctctaccaag aatggtgatg aaaaagtggg  
360

gagcagaatt ttaaattttt attttcatat ttatccttct ccacattttt ggtttcttcc  
420

atttttttat aaaatgattt atttttagggc ataggtaact tttcaatttt tttcattcta  
480

ttcgatcaaa taaatagaaa aataatttac ttttctttct ttttaaccttt ttcatttttc  
540

tctcataacg accacttatt aattacctct ttnccccac tttttgctat ncaaattctat  
600

ctttgaattt cttccttttc attttgggtct cn  
632

<210> 45  
<211> 650  
<212> DNA  
<213> soybean  
<220>  
<221> misc\_feature  
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
<400> 45  
ttcacagaca tagcaaaaatt ctgaagtaag aagcaagttc acgtgtgatg gcgaaaccca  
60

ttatagaata tgttagactg aaaggtaaca aattaaaata tgttttattg cagaaaccat  
120

aaactaataa accttttggg tagatagaaa agtgataaat catacataat aataactgaa  
180

atactcagct tttaatcaat ttaattcaat atatatctat ttttgaattt ttcaaagaga  
240

tgcttagcta gggaggaaac ctaatttagt ataaaaaaaa gaaacaaatt aaaaacataa  
300

attgccattg aatgcctctt aaaatattcc gatccattga tgtctacata ataatatata  
360

ttattgatat aataaccgat tgaataaaaat ggatatacct attacgtaat agcagatttg  
420

tctacgcaa agagacagtc aaagggtgcta attagaaatt aatcgcccca taataaaatt  
480

ctaaaccttt gaaaagataa atcaattctc aaaaagattt attttactta tctcagtacc  
540

atgcaccatg gatcatctta ctgggtctgg tangaatttt caaagctacg ccacaaattg  
600

aaattgggct aaaaatcaaa catgcatggg gtcacaacta tattactagt  
650

<210> 46

<211> 628

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 46

gaatgcacat tttataaacg tgttgatcct ctccccgnng ggggaccaat taataaggta  
60

ccctgttgcc cctaggggac attggatggc catcagatgg tgcatatata caccaaagtt  
120

tatacagcat tatagtgact ttcaacctcc tcaactccgag gtccccatat attctctcta  
180

ttgaacttgt aaagactaat gaacttatga agactatcac tgaaaccac tatggaagcc  
240

ccagtagtaa aatggncatg catgctcacc aaaagtttat acagcattat agcgacatac  
300

gacctcactc ccaggncac atgctctatn gaacttctaa agctatctcn gaaccctatt  
360

atagcttcat gagggtaaca tgcatttttag cgacttagaa aactacatat cattgagcgt  
420

gacntttaag aaggcctcat tttgacacaa aagaacatga tggatttgcc tttatatctg  
480

gttactaacc ttgatagcta ttttggnacag agagaaaaat attgacatgc ccgnggaatc  
540

aaaaggtaga taatnattaa agagataaag aactatcccc ttgctagggg naaaaaaaaaa  
600

ntatatccct atttaaataa aanccatc  
628

<210> 47

<211> 736

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 47

tggtgtatat aattaaaatg agtttaatat ttatgtatta atagtataaa atttatcata  
60

catgatgaat ggtgaaattt tgaattatga ttaaataatt atataaaaaa atttacatga  
120

tgaatgaata actttttttt tctcaattaa aattatgac ctttgtcgat atgttttact  
180

gtgtcgacct tttttttcgg gggagagggg accagtagga gaagtagtat ttagtaaaag  
240

aaggagaga gaagttgact taccctttaa ttagtttaga gaaaattaga cgagaaggaa  
300

aaaaaatagg cgaaagtcac tttttctttc tatctctacc aagaatgttg atgaaaaagt  
360

ggggagcaga attttaaatt tttattttca tatttatcct tctccacatt tttgttttct  
420

tccatttttt tataaaatga tttatttttag ggcatagtta acttttcaat ttttttcatt  
480

tctattcgat caaataaata gaaaaataat ttacttttct ttcttttaac cttttcatat  
540

ttcttcata acgaacaact tattaattta cctcttttcc ccacttttg tctatccaaa  
600

ttctatcttt gaattttctt ccttttcatt ttggttctca acccaaataa agaagaacga  
660

gtttggataa atcataaagg ttatataccc tataantgga agaacattta aatgggtccaa  
720

ngggccttaa aattct  
736

<210> 48  
<211> 695  
<212> DNA  
<213> soybean  
<220>  
<221> misc\_feature  
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
<400> 48  
atgccagagc tttccttatac gtggccccac ctatgaagaa tacacccacg ttgaaataca  
60

tgttgttggt gttggacgag cccagcccga gagtgccggt ccacgagtat cccaacgtg  
120

catggcgcat gcgcttgaaa cctagtattc atcttcctga tggaggcagc cacgtgtccg  
180

acaaggtcaa tgttgccgtt ttcgtgaaaa gggatgataa tgaaaggcac catattgtct  
240

tgggagaggt tgaaaatggc gtcgtgcatg ctcttgtaag gtgccacgtt gatgtagggg  
300

agaaccttga ctggcccact tgagttgttg gagtagtttt cgaaggcttg catgatgttg  
360

ttggtgttgg ggtaattcac agacaagaat tttctgagac cgtgtctatg ttttatggga  
420

aggagaatgg gtgcactttt cccacgagct cgataaaggt ggactgcgta naccatatgg  
480

gctctnttgc actggggttg actcttctaa taanggcagn gatgccncnc nccgtttgct  
540

tnattatgta cncaacaaac aatgngaaac tctctgnttn ttgggagngc tttggatcgn  
600

tctcanntnc ccttnnaata anctttntnn gngnactttn agggcgangc ttnnncnata  
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tgntaaccaa gggngntacn annnnnggnt ntaan  
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<210> 49  
<211> 625  
<212> DNA  
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<220>

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<221> misc_feature
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tgtcactaac aaactgattc ctcttaaata tcacaaaagt acatgtcgat ataaatatga
180

gattataaat tcatgatata tattttcgat ttttacatat aatgtttttt ttatcttttt
240

tagttcctaa taagcatttt taaatggctt atgttcctac ttgcatatac agggacccat
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taatgggacg aggttcactg cgagcatgaa caacgtggct ttcgttctcc cgaacaacgt
360

gtccatcttg caggctcacc acctcggaat ccctggagtg ntcaccactg attttcggg
420

gaagccgccg gtgaagttna attacacccg gcaatgtgag ccgntcgctg gggcaacctg
480

ntcccgggac aaaggcacac aagttgaagt ttgggtcgag ggngcagatt gggngtgcan
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gatactagca ttgcactcct gagaaccacc ctatccatct tcatggggac caattctaca
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ttggtgcaga nggttcggg aacnc
625

<210> 50
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<212> DNA
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taattaagaa gttgtattcg tctgaatggt gtgtctaaaa gggttgattg atgaatgatg
180

gctacatgtg agagtttgat aacaacagct agctagccat tagccaagcc actaactaga
240

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cattagtttt ggttggttgt cagacaaacc gttagacctg agaacgaaag cgtattaaac  
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aaaagatgat atgtagactt ttaatatataa aagagatgga gaaaccaaatt tgagatttga  
360

taggtgaact ataaatcatg acagtgcatt agacaagttg gtagagtttg ttactaactc  
420

atcagattct taagaaaggc aaaaatagaa actacaccac atgtcgctag cgataacgtg  
480

caatttataa ataaataatg gcttcatttt catggttagt tataaattaa tgggtcacaa  
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agggatatag aaagaataaa a  
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<210> 51

<211> 480

<212> DNA

<213> soybean

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<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 51

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ccaacacaaa tacgggcgat gggaaacatc tgaagaccgc tccaaagcgc cncataactaa  
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attgnnagga aaatttatat ctgacctttc atgggtgggg ggtgcatctg ctataaggaa  
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gggttcattc tgggcaagat ctgtggaaaa caatattggg gatcaaattt tagggagtga  
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tgctacaacc tcttcattat acatggattc tgaaataagt ggtgtgaact ttaaagtga  
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cgaagacggc atgcaaatgc ctggtattca tctagttgat ttatttgaga ctgacaccaa  
360

tacaagcggc gataaacatg attcccacta tgatgaagng ccatcatctt atgggtttga  
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<210> 52

<211> 480

<212> DNA  
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 120  
  
 attggnnagga aaatttatat ctgacctttc atgggtgggg ggtgcatctg ctataaggaa  
 180  
  
 ggggttcattc tgggcaagat ctgtggaaaa caatattggg gatcaaattt tagggagtga  
 240  
  
 tgctacaacc tcttcattat acatggattc tgaaataagt ggtgtgaact ttaaagtga  
 300  
  
 cgaagacggc atgcaaatgc ctggtattca tctagttgat ttatttgaga ctgacaccaa  
 360  
  
 tacaagcggc gataaacatg attcccacta tgatgaagng ccacatctt atgggtttga  
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 480  
  
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 <212> DNA  
 <213> soybean  
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 tttaataata attaagggtc tagcttatat atattatata gttgatatag actactttca  
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 aaagtctgac ttaaaagtct ctttagtata cataataata taacctttta atttagtta  
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 aaaatttgtc cctaaataaa ttaataaatc caaacttata tacaagttaa taggcttaag  
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 tcttaaaaaa ataatatata tatatatata taaagcatta aaacatttca atgaaaacaa  
 360

tataataata ataataataa atatattatt gttattaatt catagatttt attattacta  
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ttatagaata atttgtgtgt atatatataa atatatagag agagagaggg tcattttata  
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tgagtgagaa aatttaaata ttattatgaa ttttcaaaat taaaatcaca tgccatatga  
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ttttcttaaa aaattacgta actttttttt ttacaaaagt aatcatatgg ttttaaaaac  
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taatttaaatt aacttatata taactatatc agntaaaatt ngggtcataa aataagtata  
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tcagntattt tacaaaaatt ataagntttc ataaataaat accaaatgat agtcccaggn  
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gatgggncag cttnnng  
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<210> 54

<211> 642

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP).

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gctttcggat cacaaggctt gtttagtatt cggttaagaaa gaaagaaata ggtgataaat  
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aaagtggata gaaacataaa agaaaggaat aaagtaatga aaataaggga gaagtagaat  
180

aatggaaata gataagaaat agaatggatt cgatagtata tctagtttaa gagaaataag  
240

aaaaaataag aacaagaaaa aaaattgcat ttaatttat tatttgtact gtatcgatga  
300

ttggcacgag attataagtt ttttttttcg tgtttacgtt gaaggattat atatcatacc  
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atttgtttgt caaccaacac ggaactttaa gtctcttgat gttcaaaagc acttaaaact  
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aaggaatttt acatcatatt agtcgctgta gactgatata ggattttaag cctatatatc  
480

tagcattgat cgggtgtcaa tcaatatcac attaatgatc ggtaaaccat tcatataacc  
540



cctttgattg gtcaagaaat ggctttatga atncccagga ttgagcccag aagacagggtg  
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atactagggt caattcatgg ttttaggata ggctcgtaaa cc  
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<210> 55  
<211> 659  
<212> DNA  
<213> soybean  
<220>  
<221> misc\_feature  
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
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aaaataaaat aaagatccaa atgatagtgg gataaccgaa gaggaatgtc tttcaaccac  
120

tgctgaccg ccaccactgc caacagccta gtatcaaccg aatccacata taccaacaat  
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cttcagacaa acacttctaa gttggtgctg aagagacaat atctcatggg tagatcaaat  
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taagagtgct accaataaca aaatcgggat catttgacta acaaacagtt atgtgcattg  
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gatgttctac catagtacat tgctttatgt gaaattcttt taattattca atattgacat  
360

gntcttatat atatatatat atatatatat atatatatat atatacgagg gattgnatta  
420

tctctgaaaa aagattttat cataaaatca taatgatttc tcataatgna tctttacatt  
480

ttaaaggtag ataaataaaa ttgattttaa tnggnagata taattaaaat acataattaa  
540

tatgactttt aaccaaattg atatataaac acttaaaaaa aagttcatga acgnccgggg  
600

ngnattggnt gggncaaaaa aaaattaata ctatcaacct aattaataat tatttatan  
659

<210> 56  
<211> 805  
<212> DNA  
<213> soybean  
<220>  
<221> misc\_feature  
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
<400> 56

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<210> 57
<211> 632
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<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)
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tgattttttt ttttaataata attaagggttc tagcttatat atattatata gttgatatag
120
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actacttttca aaagtctgac ttaaaagtct ctttagtata cataataata taacctttta  
180

atttagttaa aaaatttgtc cctaaataaa ttaataaatc caaacttata tacaagttaa  
240

taggcttaag tcttaaaaaa ataatatata tatatatata taaagcatta aaacatttca  
300

atgaaaacaa tataataata ataataataa atatattatt gttattaatt catagatttt  
360

attattacta ttatagaata atttgtgtgt atatataata atatatagag agagagaggg  
420

tcattttata tgagtgagaa aatttaaata ttattatgaa ttttcaaaat taaaatcaca  
480

tgccatatga ttttcttaaa aaattacgta actttttttt ttacaaaagt aatcatatgg  
540

ttttaaaaaac taattttaat aacttatata taactatata agttaaattt gggtcataaa  
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ataagtatat cagttatttt acaaaattat aa  
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<210> 58

<211> 437

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 58

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gttttaggttt gttatcgtga acaagaaacc gtgtggttgt aaaattattt tgacaagaga  
120

agagcgtgaa gaggaagagg aagataccat gttggacgag gggttaattg acgagttcaa  
180

gagcatgaaa tatggcattg gtaacgtttg ttggtacgag attacggtgg acgatggggg  
240

ggaggtggtg gaagcagtgc atagtttgga aggaaactat gatcttgtga tggtggggaag  
300

gcgccacaat gatggatctt tgaatggaaa agaaatgaca actttcatgg agaacgctga  
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tgcatggga atattgtggg atatgttccc ttcnccanc ntgnntggcn tngttccgct  
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tttttcgnet ntngcc  
437

<210> 59  
<211> 681  
<212> DNA  
<213> soybean  
<220>  
<221> misc\_feature  
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
<400> 59  
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ctgcttcttt gggtagctta agagagctca atgagatttc ccttagtcat aataagttaa  
120

gtggagctat accaaatgaa ataggaaccc tttctaggct taagacactt gacatttcta  
180

ataatgcctt gaatgggaac ttgcctgcta ccctctctaa tttatcctca cttacactgc  
240

tgaatgcaga gaacaacctc cttgacaatc aaatccctca aagtttaggt agattgcgta  
300

atctttctgt tctgattttg agtagaaacc aatttagtgg acatattcct tcaagcattg  
360

caaacatttc ctgcttagg cagcttgatt tgcactgaat aatttcagtg gagaaattcc  
420

agtctccttt gacagtcaag cgcagctaaa tctcttcaat ggttcctaca atagcctctc  
480

agggctctgcc cccctctgct tggcaagaaa tttaactcaa gctcatttgt gggaaatatt  
540

caactatgtg gggtagagcc ttcaacccca tggctttcca agctncatca caagggggca  
600

ttggccccct cctgagnngc aaacatcacc atcataggaa gctaacccca aagacataat  
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tctcatagta nccaggaggt n  
681

<210> 60  
<211> 644  
<212> DNA  
<213> soybean  
<220>  
<221> misc\_feature  
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
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ataattaaaa ttgtaaggct ggtcgtgtat aaattaaaca aaaggccctc tattcaaacc  
120

ttcatatatac atacctgttt ttaattaacg cggactactt tttcatataa aaaaaagatc  
180

attagaggat taatttaaag cgtttttagtt ttttaattacc aaagagtata attattatta  
240

ggcgctttgt cccacaatca atcacctaaa caagaaaaag aaaaagaaaa aaaaagtcaa  
300

attggactaa tgcaaaagtg gcacaatctt tgtcttgaac tctttaatta gcaacaaatt  
360

atactcttct gcacaaatca caagaatacc ttacatgaaa agaattggtaa tttgacgggt  
420

tacattaaat tatatgcagt tttctgcagg taattaattt tcaagaattt aagggtgggt  
480

ggtaattttc aatagctagc ttgactagca aaggaaagaa taaaggtaaa atgcttcttg  
540

gtttggcctt ttggattggt atactttttg ctaaacggaa atgggttatat gaatggtaaa  
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<210> 61

<211> 678

<212> DNA

<213> soybean

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<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 61

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taagaaacta tattttgtga tgggtttaaa atcgacatta agtggttctta atctaccaca  
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aaaagcacat ttccaaaaaa ataaattaat tttaaaaatt ataagatcaa attgaatcaa  
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ttttaaaaat taaaatatta aattgaaaaa aaaaataaag gatcaaattg aacataaata  
240

ataaatttga ggattaaaaa actaatttaa cctttaattt tttctcactt atattaatat  
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taaaaaatta tattgatttt cctaataact ccttatctca attaaaattt ccaaaaatta  
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attctagcat cttcaaacac tactcaccat gaaagttcat cacaaccatc tttctttctc  
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ttttctctac atcatgtttt cgcttcgcaa actttattgt gttcctagtc ttagacgtct  
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gataatcttc cacaagtatt gaactataac acttattgga ctgacaccgg taatagctaa  
540

caccaaata gacgtgcact tgacttttat atcactaaga aaatttcaac acattgacca  
600

agattagctc catcttgctt taacacttgg ttgactagtc acttaagtgc aacaaccact  
660

ttgatatcat tgggtgga  
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<212> DNA

<213> soybean

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<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 62

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tctattatat attttttctt cttaaattac atgatagtat ttcattatta tttgacaata  
120

atgatatttt tatctcataa atattatttt gttttaaaaa tattcatagc acacacgagt  
180

tttttatatc aacaaagagg tatcacttca gttggtcaat ttggtotaac ttttagacaa  
240

tgctgatatg ttgaattgaa ttggaatttg gcagtatata ttttactttt tgccccctta  
300

ttttcaatca aattagagta gacgcctcgt attattggca tacatggata ttggatcggc  
360

acctgtgttt cagacctgag tcacatctga ctcggatcga ttttatotta catgaaaatt  
420

ccaaaataat gaaagatatg gcaattggca ccatgtaact ctatggacac caatgcttca  
480

ccgtagagct ctaaatttcg aggccttcta tatatagctt tgcgtgacta tgnnaaatta  
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ntcaatatcn tnttaatttt tttgngggccc c  
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<210> 63  
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<212> DNA  
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120

tatgttacta tttagtcaag gaggaaaaaa aagtgataag ggaagaaaca agggatattt  
180

cctgttataa caaacttaaa atggcgacta ttttgacgac attgcaaata ctcatagtac  
240

gatataaatt ttgaatttaa tatacaatga ataggcatat tcattttcta ccccaaaaaa  
300

gcataactcat ttatgtacat ttaattttct ctccatagag gaattaatgt acaaccatgc  
360

ataagggatg agcgaaaggg acagattatt gcaatccaga agcatccaag gaaagttgga  
420

taaacaaatc aattaatata tataaaaaaa aaacaaaaat gctcctagta gaagattaaa  
480

ggaagagttg gctatatatg gcaaaccttt tctaactggt ttaccctctt ctcatcacc  
540

gcattgcac accaatacgg gaacttttcc cattacaaaa ctcatggaa gccaacatat  
600

cccccaaat tccactggat ctgcattgtc catgaaattt gacatttctt cttctacaaa  
660

attcccatgc tatgtogttt tccaccatcc taggtcatag tccttcttca ttccccgaat  
720

cgnttcacac ttgtatgcaa tcttccaccc cagcctcatg ggaaacaccg ntaacactat  
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 120  
  
 ctctttactg caacttgact tccatcctcc aaaatagcct tataaacagt tccatagggtg  
 180  
  
 ctctttccca tgatctcagc tgttgcacac aagagatcat cagctgtaaa agccattggt  
 240  
  
 ccatcaaaat ggactagttt cccctccagcc tccccacctg cttcaacatc accaccagca  
 300  
  
 actggaggga ctcccttttc tgtcctcata gtggccgctc taccctcggt ggcttggccg  
 360  
  
 tcccggcctt agatgttgat ctctttctga tcaggcagaa aagcaggaca caacaaagta  
 420  
  
 taatcaggac tacgaggaga actcctgcta ctatgagaat tatgtctttg ggcttagctt  
 480  
  
 ctatgatggt gatggtttga cacttcagga ggtggggcaa tgactccttg tgatggagct  
 540  
  
 tgggaaagac atggggttga agggctggac ccacatagtt gaatatttcc acaaatgagc  
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 <212> DNA  
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aacgtgcatg gcgcatgcgc ttgaaaccta gtattcatct tcctgatgga ggcagccacg  
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ttgtcttggg cgaggttgaa aatggcgtcg tgcattgctt tgtaagggtgc cacgttgatg  
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tagggaagaa ccttgactgg ccacttgag ttgttgaggt agttttcgaa ggcttgcatg  
360

atgtggttgg tggtggggta attcacagac aagaattttc tgcgaccggg tctatgtttt  
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atgggaagga gaatgggtgc acttttccca cgagctcnat aagggggact gcntanacnc  
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atatggggct ctctt  
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<210> 66

<211> 480

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 66

cnttcttaga atcgaattct ttggtatcag aacatatcag tcatttttaa agaataagaa  
60

attaaattag acttaatttt taagagtatg gattaaaatg taaaatttgt ggggattata  
120

aacataaata agtaattttt cctatatgag acatttattg aaatcttaag ataagatacg  
180

tacatgcaaa ttaaattgat gcatgataat agaattaggt gaatagtcca atacctgaca  
240

cctcttttgt ccgaagtttt tggggcactt cttgatacct aaaccacag tgaagaagag  
300

gctctggtca atttcagtgg gtacttcaac ttttctaggg cttctgaagc ttttgctgaa  
360

ggaagtgact gcgttttgtt ccgttgtaag caggagtggt aggcattata gggttggttt  
420

tggtctttac tcctttggca cgatggtgag aatgcttatt gtggtgattc ggtgatttgt  
480

<210> 67

<211> 669

<212> DNA  
 <213> soybean  
 <220>  
 <221> misc\_feature  
 <223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
 <400> 67  
 atgccccaaa aatttaccta aaagcaaata aaaaagatga gtatttcttt taaattaaaa  
 60  
  
 atattttaat aaaaataaaa taaagatcca aatgataatg tgataaccga agaggaatgt  
 120  
  
 ctttcaacca ctgctgacc gccaccactg ccaacagcct agtatcaacc gaatccacat  
 180  
  
 ataccaacaa tcttcagaca aacacttcta agttggtgct gaagagacaa tatctcatgg  
 240  
  
 gtagatcaaa ttaagagtgc taccaataac aaaatcgga tcatttgact aacaaacagt  
 300  
  
 tatgtgcatt ggatgttcta ccatagtaca ttgctttatg tgaaattctt ttaattatc  
 360  
  
 aatattgaca tgggtcttat atatatatat atatatatat atatatatat atatatacga  
 420  
  
 gggattgtat tatctctgaa aaaagatttt atcataaaat cataatgatt tctcataatg  
 480  
  
 gatcctntaca ttttaaagggt agataaataa aattgatttt aaatngggag atataattaa  
 540  
  
 aanacataat taatatgact ttttaacaaat tgatatataa acacttaaaa aaaagntcca  
 600  
  
 tgacgcacng ggggnattgg tgggacaaaa aaaattatct atcactaatt aaaantatta  
 660  
  
 taaatatan  
 669  
  
  
 <210> 68  
 <211> 486  
 <212> DNA  
 <213> soybean  
 <220>  
 <221> misc\_feature  
 <223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
 <400> 68  
 tgggtgtat aattaaaatg agtttaatat ttatgtatta atagtataaa atttatcata  
 60  
  
 catgatgaat ggtgaaattt tgaattatga ttaaataatt atataaaaaa atttacatga  
 120

tgaatgaata actttttttt totcaattaa aattatgac ctttgtcgat atgttttact  
180

gtgtcgacct tttttttcgg gggagagggg accagtagga gaagtagtat ttagtaaaag  
240

aaggagaga gaagttgact taccctttaa ttagtttaga gaaaattaga cgagaaggaa  
300

aaaaaatagg cgaaagtcac tttttctttc tatctctacc aagaatgttg atgaaaaagt  
360

ggggagcaga attttaaatt tttattttca tttttatcct tctccacatt tttgntttct  
420

tccatttttt tataaaanga tttatttttag gcatagntaa cttttcaatt tttttcattt  
480

ctattc  
486

<210> 69

<211> 779

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 69

tatttgtaaa ttgtttttta taattgaaaa gaaaataagg ttaaattatt ttcatataaa  
60

aaatttaatt tgttcttata agttattttg aaaattttat taaaataagt tgaaaacaat  
120

ttataaataa atcataaact ataattttat aagttttctt aaatacttac acgtatgcc  
180

taaaataagt tcagataaga tataaataaa ttcttccaaa cacatcttaa atctatattt  
240

ttttaaaca aactttcatc gttaaagga tattataata ataataataa acttcaatca  
300

ttaaçaatta atatatgtgg ataaaagagc attcaaaatg atattttatt agcacatgac  
360

aatcacatt actctcaagc tattttttta aactaataaa aacttacata ttatatgata  
420

tgatatatac tctctctata ttacacttt tttagataa acaaggataa aaaatgatgt  
480

aatatgacc gcatataata ttattttataa tgtacggaat gccgtttttg acattttata  
540

taatatatct gggggcaatt attttcttaa ccaataatta gcaaattttt atcttgcttt  
600

ttctccatgg gggctaaatt aaactaaagg gncgtaccca atccagtccc actttttttt  
660

aaataattnn tttccntccc acttagnaaa ggagtntttn ggcttaaatn ggcagnncca  
720

ttaaccataa gcctttntgg taaggagtct taccaantaa aatggggaag gcccccccc  
779

<210> 70

<211> 677

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 70

ttattggctt aacttgagtt tcaactcctt ctctggctct ttaccagcta gcctaactca  
60

ctcattttct ctcacttttc tttctcttca aaataacaat ctttctggct cccttcctaa  
120

ctcttggggg ggggaattcca agaatggctt ctttaggctt caaaatttga tcttagatca  
180

taactttttc actggtgacg ttcttgcttc tttgggtagc ttaagagagc tcaatgagat  
240

ttcccttagt cataataagt ttagtggagc tataccaaat gaaataggaa ccctttctag  
300

gcttaagaca cttgacattt ctaataatgc cttgaatggg aacttgcttg ctaccctctc  
360

taatttatcc tcacttacac tgctgaatgc agagaacaac ctcttgaca atcaaatccc  
420

tcaaagttta ggtagattgc gtaatctttc tgttctgatt ttgagtagaa accaatttag  
480

tggacatatt ctttcaagca ttgcaaakat ttctctgctt aggcagcttg atttgcaactg  
540

aataatttca gtggagaaat tccagctcct ttgcagtcag cgcagctaaa tctcttcaat  
600

ggttcctaca atagcctctc anggtctgtc cccctctgc ttgccaagaa atttaactca  
660

agctcatttg tgggaat  
677

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<210> 71
<211> 571
<212> DNA
<213> soybean
<220>
<221> misc_feature
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)
<400> 71
tgggactggc tgtgactgat ctctctgggc taatctcttc cagctgctgg agaacttgat
60

gaacttctgg tcgtgctgat ggagaaggat caacacagtg caaagcgagc ttcaacgtgt
120

ttagcaactc gtcgccaact gtggatgcat ctctcatcaa gtctgcatca aaaacctcat
180

ttgtccactc ctctttgaca actgaggcaa cccactgagg caaatctagt ccattcatag
240

acacccagg tgatttcctc gttaggagtt ctaacaagat aacaccaaga ctgtagatat
300

cagttttagt gtttgcttcc ttgagctttg agagctcagg tgcccgggtat cccaatgctt
360

cagctgtagc tatcacgttg gaattagcag cagttgacat caaccgagaa agacccaaaat
420

ctgcaatttt agcatttgna ttctcattaa acaacacaat gntggatgng anggtncat
480

ggatgaaggc cttctnggna agnaagnaaa acaaagcacc gggccaaggc ttgggctaata
540

ttcaaccttg gggggcaaac naanaaatgt t
571

<210> 72
<211> 756
<212> DNA
<213> soybean
<220>
<221> misc_feature
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)
<400> 72
attggcttaa cttgagtttc aactccttct ctggctcctt accagctagc ctaactcact
60

cattttctct cacttttctt tctcttcaaa ataacaatct ttntggctcc cttncctaact
120

gtgggggggg gaatancaag gngngcttta ggctgcaaaa ttgataccta gatcataact
180

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ttttcactgg tgacgttccct gcttccttgg gtagcttaag agagctcaat gagatttccc  
240

ttagtcataa taagtttagt ggagctatac caaatgaaat aggaaccctt tctaggctta  
300

agacacttga catttctaataat aatgccttga atgggaactt gcctgctacc ctctctaatt  
360

tatcctcact tacactgctg aatgcagaga acaacctcct tgacaatcaa atccctcaaa  
420

gtttaggtag attgcgtact ctttcctggt ccgattttga gtagaaacca atttagtgga  
480

catattcctt caagcatngc nnacatttcc tcgcttaggc agcttgattg tcaactgaata  
540

atttcaggtg gagaaattnc agtctncttt gacagtcagc gcagtctaaa tcttcttcaa  
600

tggttnctac aataggcctc tcagggctctg gcccccttt gnttggccaa ggaaanttaa  
660

cttaagctta tttggngggg aaanattcaa ctatgggggg acncggccct ttaaacccca  
720

gggnttttcc caggttcctt ccaagggngc anttgt  
756

<210> 73

<211> 557

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 73

tgtgactgat ctctctgggc taatctcttc cagctgctgg agaacttgat gaacttctgg  
60

tcgtgctgat ggagaaggat caacacagtg caaagcgagc ttcaacgtgt ttagcaactc  
120

gtcgccaact gtggatgcat ctctcatcaa gtctgcatca aaaacctcat ttgtccactc  
180

ctctttgaca actgaggcaa cccactgagg caaatctagt ccattcatag acnccccagg  
240

tgatttcntc gttaggagtt ntaacaagat aacaccaaga ctgtagatat cagtttttagt  
300

gtttgctttc ttgagctttg agagttaagg gncccgant cccannngtc nagttgnagt  
360

tatancgttg gaattagcag nagttgcntc aaccgaaaaa gaccaaaatc tgaatttttag  
420

catttgtttt tcatcaagca acacattgnt ggatgngagg tcccatgtat gatgttctcc  
480

tggaatgaa ggcaaacaag cccgggcca ggcttgggct attttaatcc ttggtggcca  
540

aacaatgaaa ggtnat  
557

<210> 74

<211> 673

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 74

gggactggct gtgactgac tctctggct aatctcttcc agctgctgga gaacttgatg  
60

aacttctggt cgtgctgatg gagaaggatc aacacagtgc aaagcgagct tcaacgtggt  
120

tagcaactcg tcgccaactg tggatgcac tctcatcaag tctgcatcaa aaacctcatt  
180

tgtccactcc tctttgacaa ctgaggcaac ccactgaggc aaatctagtc cattcataga  
240

caccccaggt gatttcctcg ttaggagttc taacaagata acaccaagac tgtagatatc  
300

agtttttagtg tttgctttct tgagcttttg agaagctcag gtgcccggta tcccaaagtc  
360

ttccagctgt agcttatcac cgttgggaat taagcagcaa gttggacatt caacccggag  
420

naaaagaccc aaaaattttg caaattttta agcaatttng gnanttcttn aatcaaggcc  
480

aaccaccaat tggnttggga atggtggaag ggtttcccca atggtaattg gaagggtttc  
540

ttccctnngg gaaaatggaa aggggcaana aaacaaaggc ccaacngggg ccccaaagg  
600

nttttggggg cttattttt tncnaatncc ctttggnngg ggncccaa atcnaaantgg  
660

aaattgntt tnn  
673

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<210> 75  
 <211> 602  
 <212> DNA  
 <213> soybean  
 <220>  
 <221> misc\_feature  
 <223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
 <400> 75  
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 60  
 gtggaattag caagactata agggattgct cctgtgagca agttgttgct gaggtcaaga  
 120  
 gactgaagca aagggcagaa acctaaagaa agaggtatgg aacctgtaag cctattgttg  
 180  
 aataactgaa cccctctaag gttgggaaga agtcccaaag ttgaagggat tgaaccacca  
 240  
 atttggttat catgaagact aagcttcctg aggccttgaa gttggccaat tttggcggtg  
 300  
 attcgacccc tcaaaccctt ccaaggaagc tggatcacia taacctgtcc ctgagcacac  
 360  
 ttgattccaa cccaacctcc ggaacaagct ccatagccac tggcattcca gctcccgcga  
 420  
 gaacccttct ggatcagcca actcttgctt gaaagcttat cacatgtacc tctctacaga  
 480  
 taggagggtg cttcttccct ttactggnc tacctcttcg ggaataagcc acctaagag  
 540  
 aaagaaagan ctgggatagc taactctaca tagnctcaag gcnagagata attagggaaa  
 600  
 ng  
 602

<210> 76  
 <211> 748  
 <212> DNA  
 <213> soybean  
 <220>  
 <221> misc\_feature  
 <223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
 <400> 76  
 attggcttaa cttgagtttc aactccttct ctggtccttt accagctagc ctaactcact  
 60  
 cattttctct cacttttctt tctcttcaaa ataacaatct ttctggctcc cttcctaact  
 120



cttggggtgg gaattccaag aatggcttct ttaggcttca aaatttgatc ctagatcata  
180

actttttcac tggtgacgtt cctgcttctt tgggtagctt aagagagctc aatgagattt  
240

cccttagtca taataagttt aatggagctg taccaaataa aataggaacc ctttctaggc  
300

ttaagacact tgacatttct aataatgcct tgaatgggaa cttgcctgct accctctcta  
360

atttatcctc acttacactg ctgaatgcag agaacaacct ctttgacaat caaatccctc  
420

aaagtttagg tagattgcgt aatctttctg ttctgatttt gggtagaaac caatttagtg  
480

gacatattcc ttcaagcatt gcaaacattt cctcgcttag gcagcttgat ttgcactgaa  
540

taatttcagt ggagaaattc cagtctcctt tgacagtcaa gcgcaagtct aaatctcttc  
600

aatgtttcct acaatagcct ctcanggtct gnnccccctc tgcttgccaa gaaatttaac  
660

tcaagctcat ttgtgggaaa tattcaacta tgtgggacag nccttcaacc ccatgttttn  
720

ccaagcttca tacaaggagc atggccct  
748

<210> 77

<211> 563

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 77

ctggctgtga ctgatctctc tgggtctaatac tcttccagct gctggagAAC ttgatgaact  
60

tctggctcgtg ctgatggaga aggatcaaca cagtgcaaag cgagcttcaa cgtgttttagc  
120

aactcgtcgc caactgtgga tgcattctctc atcaagtctg catcaaaaac ctcatttgtc  
180

cactcctctt tgacaactga ggcaaccac tgaggcaaata ctagtccatt catagacacc  
240

ccaggtgatt tcctcgcttag gagttctaac aagataaac caagactgta gatatacagtt  
300

ttagtgtttg ctttcttgag ctttgagagc tcaggtgccc ggtatcccaa tgetccagct  
360

gtagctatca cgttggaatt agcagcagtt gacatcaacc cgagaaagac caaaatctgc  
420

aattttagca tttgtattct catcaagcaa cacattgctg gatgtgaggt tcccatgtat  
480

gatgttctcc tgggaatgaa ggcagaacaa gccacggcca agcttggcta tttcatcctt  
540

gtggccaatc aatgaatggt cat  
563

<210> 78

<211> 623

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 78

gattttgcac atctacttga gtaggcttca catgattccg tgtattactt ttatttttgg  
60

atatatacca tgtggagtat agtatcactt tttgtcctac aaccacattt tatgagactt  
120

gcatttttatg tgacatgaac ataaaaaata atgaaaaaga aaatgtcaca tatatatgat  
180

acaatctttt taaaagtcaa tttgaataat ttttcatcag gaggaaaaag aagagagaaa  
240

atgaattaag tttcttctaa aaattaaaat caacttataa aaagaaaaaa ctttaatgaa  
300

aaaaattcaa aaagaaaaag aataaaatga tcaatagcct ttaggtttta gcacaagggtg  
360

aatccaaata aagaccccaa aagatagtagc agaaccacac aatggtaaaa tctagaaata  
420

tacatgtaaa gactgcattt atagaccatc atgactagca aatgcttaaa ggcacataga  
480

tgaattaatc tatgcaacaa aatctgnccc aagttttttt tangcaagga aaatcatatc  
540

attttattaa ggataactga gaggaccaat ggtgtaatca attgaaatca tgcgaggctt  
600

acatgaaatc tgtcaccaag tac  
623

<210> 79  
 <211> 605  
 <212> DNA  
 <213> soybean  
 <220>  
 <221> misc\_feature  
 <223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
 <400> 79  
 ctcccgggtc ccaagtaata ggccccctcag agccaaaaca ttggggggggc taatttttcc  
 60

tagaacactg acttctgatt caaattctct atgaccttta gtgatctttt ccctcaatct  
 120

ctttactgca acttgacttc catctccaa aatagcctta taaacagntc cataggtgct  
 180

ctttcccatg atctcagctg gtgcacacaa gagatcatca gctgtaaaag ccattgggtcc  
 240

atcaaaatgg actagtttcc ctccagcctc cccacctgct tcaacatcac caccagcaac  
 300

tggagggact cttttttctg cctcatagtg gccgctctac cctcgggtggc ttggccgntc  
 360

ccggccttag atgntgatct ctttctgatc aggcagaaaa gcaggacaca acaaagnata  
 420

atcaggacta cgaggagaac tcctgctact atgagaatta tgnctttggg gcttagcttc  
 480

ctatgatggg gatgggtnga cacttcanga gggggggcaa tgactccctg gganggagct  
 540

tgggaaagac atgggggtga aggnctgnac ccacataggn gaaaaattcc cacaaangag  
 600

cnngn  
 605

<210> 80  
 <211> 711  
 <212> DNA  
 <213> soybean  
 <220>  
 <221> misc\_feature  
 <223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
 <400> 80  
 ttaangncca acgactcact atagggcgaa ttgggcccga cgtcgcatgc tcccggccgc  
 60

catggccgcg ggattggctt aacttgagtt tcaactcctt ctctggctct ttaccagcta  
 120

gcctaactca ctcattttct ctcacttttc tttctcttcn taaaataaca atctttctgg  
180

ctcccttcct aactcttggg gtgggaattc caagaatggc ttcttttaggc ttcaaaattt  
240

gacctagat cataactttt tcaactggta cgttcctgct tctttgggta gcttaagaga  
300

gctcaatgag atttccctta gtcataataa gtttagtgga gctataccaa atgaaatagg  
360

aaccctttct aggcttaaga cacttgacat ttctaataat gccttgaatg ggaacttgcc  
420

tgctaccctc tctaatttat cctcacttac actgctgaat gcagagaaca acctccttga  
480

caatcaaadc cctcaaagtt taggtagatt gcgtaatctt tctgttctga ttttgagtag  
540

aaaccaattt agtggacata ttccttcaag cattgcaaac atttcctcgc ttaggcagct  
600

tgatttgtca ctgaataatt tcagtggaga aattccagtc tcctttgaca gtcagcgcag  
660

tctaaatctc ttcaatgttt cctacaatag cctctcaggg tctgtcccc n  
711

<210> 81

<211> 716

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 81

ttnttgaaaa ccctttgcta tttaggtgac actatagaat actcaagcta tgcaccaac  
60

gcgttgggag ctctcccata tggtcgacct gcaggcggcc gcactagtga ttaatacgac  
120

tcactatagg gctcgagcgg ccgcccgggc aggtgggact ggctgtgact gatctctctg  
180

gtctaattctc ttccagctgc tggagaactt gatgaacttc tggtcgtgct gatggagaag  
240

gatcaacaca gtgcaaagcg agcttcaacg tgttttagcaa ctgctcgcca actgtggatg  
300

catctctcat caagtctgca tcaaaaacct catttgtcca ctctctttg acaactgagg  
360

caacccactg aggcaaactt agtccattca tagacacccc aggtgatttc ctcgtttagga  
420

gttctaacaa gataacacca agactgtaga tatcagtttt agtgtttgct ttcttgagct  
480

ttgagagctc aggtgcccgg tatcccaatg ctccagctgt agctatcacg ttggaattag  
540

cagcagttga catcaaccga gaaagaccaa aatctgcaat tttagcattt gtattctcat  
600

caagcaacac attgctggat gtgagggtcc catgtatgat gttctcctgg gaatgaaggc  
660

agaacaagcc acggggccaag tcttgggcta ttttcacct tggtgggcca atcaan  
716

<210> 82

<211> 713

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 82

ttcctaangc ctacgactcc tatagggcga attgggcccg acgtcgcattg ctcccggccg  
60

ccatggccgc gggattatac gactcactat agggctcgag cggccactat gaggacagaa  
120

aaaggagtcc ctccagttgc tggtgggtgat gttgaagcag gtggggaggc tggagggaaa  
180

ctagtccatt ttgatggacc aatggctttt acagctgatg atctcttggtg tgcaacagct  
240

gagatcatgg gaaagagcac ctatggaact gtttataagg ctattttgga ggatggaagt  
300

caagttgcag taaagagatt gagggaaaag atcactaaag gtcatagaga atttgaatca  
360

gaagtcagtg ttctaggaaa aattagacac cccaatgttt tggctctgag ggctattac  
420

ttgggaccca aaggggaaaa gcttctgggt tttgattaca tgtctaaagg aagtcttgct  
480

tctttcctac atggtaagtt tcgtgtgctg ttctttcatt aagtgttggtg tgtgctgttc  
540

tttaattata atttggagtt ttaccttagt aatctgtata attctaactg gagaacagta  
600

caaacaaaaa cacctaagga acaacacctt anctttaata taccatatca ataagtgaat  
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tattttctta ttcattctga tgcagggtgt ggaactgaaa catttatttg atn  
713

<210> 83

<211> 712

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 83

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120

ctagcctaac tcaactcattt tctctcactt ttctttctct ttaaaataac aatctttctg  
180

gctcccttcc taactcttgg ggtgggaatt ccaagaatgg cttctttagg cttcaaaatt  
240

tgatcctaga tcataacttt ttcactgggtg acgttcctgc ttctttgggt agcttaagag  
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agtcfaatga gatttccctt agtcataata agtttagtgg agctatacca aatgaaatag  
360

gaaccctttc taggcttaag acacttgaca tttctaataa tgccttgaat gggaaacttg  
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ctgctaccct ctctaattta tctcactta cactgctgaa tgcagagAAC aacctccttg  
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acaatcaaat ccctcaaagt ttaggttagat tgcgtaatct ttctgttctg attttgagta  
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gaaaccaatt tagtggacat attccttcaa gcattgcaaa catttctctg cttaggcagc  
600

ttgatttgca ctgaataatt tcagtggaga aattccagtc tcctttgcag tcagcgcagt  
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ctaaatctct tcaatggtn ctacaatagn ctctcagggt ctgncccccc tn  
712

<210> 84

<211> 681

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

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ctgcttcttt gggtagctta agagagctca atgagatttc ccttagtcat aataagttta  
120

gtggagctat accaaatgaa ataggaaccc tttctaggct taagacactt gacatttcta  
180

ataatgcctt gaatgggaac ttgcctgcta ccctctctaa tttatcctca cttacactgc  
240

tgaatgcaga gaacaacctc cttgacaatc aaatccctca aagtttaggt agattgcgta  
300

atctttctgt tctgattttg agtagaaacc aatttagtgg acatattcct tcaagcattg  
360

caaacatttc ctgcttagg cagcttgatt tgcactgaat aatttcagtg gagaaattcc  
420

agtctccttt gacagtcaag cgcagctaaa tctcttcaat ggttcctaca atagcctctc  
480

agggctctgcc cccctctgct tggcaagaaa ttaactcaa gctcatttgt gggaaatatt  
540

caactatgtg gggtagagcc ttcaacccca tggctttcca agctncatca caagggggca  
600

ttggccccct cctgagnggc aaacatcacc atcataggaa gctaacccca aagacataat  
660

tctcatagta nccaggaggt n  
681

<210> 85

<211> 639

<212> DNA

<213> soybean

<220>

<221> misc\_feature

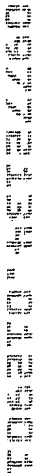
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 85

tcccccttgg gtcccaagta ataggccctc agagccaaaa cattgggggtg tctaattttt  
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cctagaacac tgacttctga ttcaaattct ctatgacctt tagtgatctt ttccctcaat  
120

ctctttactg caacttgact tccatcctcc aaaatagcct tataaacagt tccatagggtg  
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ccacctccg gaacaagctc catagccact gtcattccag cttccgcaag aacccttctg  
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gatcagccaa ctcttgcttg aaaagcttat cacatgtacc ttttacagat aggaggntgc  
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ttcttccttt cactgggtcta cctcttcgga ataagccaac ctaatgagaa agaaagatct  
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gngatagctn acttacatac tnagncagag ataattantg naagcnnaag ttaaactntt  
660

t  
661

<210> 87

<211> 626

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 87

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atatctgggt ttacttctat ctacgcaga tcttctgttg atagtactca aaatctgtct  
120

attccttttg gtccaagctc atacctttct gcacaggctc gagtagttga tgagtattct  
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atgtcccaga ttatcttaca aaatgtgctt gatggagggg tcaactggat gttaatagtt  
240

gtcactgggt caagccatgt tacatatgga tctagaggaa ctggagtgcc agcaagaatt  
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tcaggaaaaa taaaaagaa aaaccatgca gttatattac ttgaccctga aagacaattc  
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attcgcagag aaggagaagt tcctgttgct gattttttgt ggtattctgc tgcgagaccc  
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tgtagtagaa attgctttga ccgtgctgag attgctcggg ttatgaatgc tgctgggcgg  
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aggcgagatg ccctcccaca ggtaaaccac caattacagt tactaatttg tttgactgtt  
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aatcttcttg ccccatagac cctncttcca atttttagcc ctttatgtcc totcattcct  
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626

<210> 88

<211> 627

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<212> DNA
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<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)
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aatctatcca aaattaaaag gtttattctt ggaagtaatg aaatgtatct tgactctttg
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aagaatgcat tactataatg aaagagtagg tggagagagg ggataataaa atcccactaa
180

ataacatcca tgactatcac tataaaaaaa aatattatta ttaagataag aagaattatc
240

taacttgaat aagagactac taccaaagtg agaaaaaggc cttataacat agagtttttc
300

aagtttacct ataaaacttg taataagatt tgttttccaa ccatctaatt ttttattagt
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gtggactgca taaaaaaaaat atagtaacaa gaaactacta aattagactt tttgaactat
420

tcattgtatg gctgccatga aacctacctg cctggagggg tgggtccac gtaagactgt
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aagagggagg agggaagcac tagtcacaca ccggcgacg ttagcgaggc aatgttccta
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gattgaaacg gagaagggtga ttagaggggc ggaaatctca aagcagacac aggcaactaa
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tttatcgctt ctttctcat tctgtta
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<210> 89
<211> 782
<212> DNA
<213> soybean
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<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)
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agtatttcat cattatttga caataatgat atttttatct cataaatatt attttgttt
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aaaaatattc atagcacaca cgagtttttt atatcaacaa agaggtatca cttcagttgg
180

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tcaatttgggt ctaactttta gacaatgtcg tatagttgaa ttgaattgga atttggcagt  
240

atatatttta ctttttgccc ccttattttc aatcaaatta gagtagacgc ctcgtattat  
300

tggcatacat ggatattgga tcggcacctg tgtttcagac ctgagtcaca tctgactcgg  
360

atcgatttta tcttacatga aaattccaaa ataatgaaag atatggtaat tggcaccatg  
420

taactctatg gacaccaatg cttcacgtag agctctaaat ttgaggcctt ctatatatag  
480

tttgcgtgac tatgtaaatt atcaatatca ttttaattttt ttgcgaccac gaaatatacg  
540

aatttattat tgaacacaaa aagtagagtg tatattttta gtctaggatt ttatgagagg  
600

caaaaataag aataacctct tgatatattt tcttggatac actttcttta ttatatattt  
660

tttaataatg gattataatt tattggaaac aatcaaatta tangggaaaa ttcattggaa  
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taaaagaang aaatttaaaa aaaaatataa tttttaataa atttaagtaa taaaaatcct  
780

tt  
782

<210> 90

<211> 160

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 90

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60

cataggaagc taagcaccaa agacataatt ctcatagtag caggagttct cctcgtagtc  
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ctgattatac tttgttgtgt cctgcttttc tgctgatca  
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<210> 91

<211> 779

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 91

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tttaccagct agcctaactc actcattttc tctcactttt ctttctcttc aaaataacaa  
120

tctttntggc tcccttncta actgtggggg ggggaatanc aaggngggct ttaggctgca  
180

aaatttgatc ctagatcata actttttcac tggtgacgtt cctgcttctt tgggtagctt  
240

aagagagctc aatgagattt cccttagtca taataagttt agtggagcta taccaaataga  
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aataggaacc ctttctaggc ttaagacact tgacatttct aataatgcct tgaatgggaa  
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cttgccctgct accctctcta atttatcctc acttacactg ctgaatgcag agaacaacct  
420

ccttgacaat caaatccctc aaagttagg tagattgcgt actctttcct gttccgattt  
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tgagtagaaa ccaatttagt ggacatattc cttcaagcat ngcnacatt tctctgctta  
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ggcagcttga ttgtcactga ataatttcag gtggagaaat tncagtcctc tttgacagtc  
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agcgcagtct aaatcttctt caatgggtnc tacaataggc ctctcagggt ctggcccccc  
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tttgnttggc caaggaaant taacttaagc ttatttggng gggaaanatt caactatggg  
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gggacncggc cttttaaacc ccagggnntt tcccagggtc cttccaaggg ngcanttgt  
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<210> 92

<211> 743

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 92

ttggcttaac ttgagtttca actccttctc tggtccttta ccagctagcc taactcactc  
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atcttctctc acttttcttt ctcttcaaaa taacaatctt tctggctccc ttcttaactc  
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ttgggggtggg aattccaaga atggcttctt taggcttcaa aatttgatcc tagatcataa  
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ctttttcact ggtgacgttc ctgcttcttt gggtagctta agagagctca atgagatttc  
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tttatcctca cttacactgc tgaatgcaga gaacaacctc cttgacaatc aaatccctca  
420

aagtttaggt agattgcgta atctttctgt tctgattttg agtagaaacc aatttagtgg  
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acatattcct tcaagcattg caaacatttc ctgcttagg cagcttgatt tgtcactgaa  
540

taatttcagt ggagaaattc cagtctcctt tgacagtcag cgcagtctaa atctcttcaa  
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tgtttcctac aatagcctct cangttctgn cccccctctg cttgccaaga aattaactca  
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agctcatttg tgggaaatat tcaactatgt gggacaggcc ttcaacccca ngctttncca  
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agcttcatca caaggggcat tgg  
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<210> 93

<211> 742

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 93

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ctctcatttt tctttctctt caaaataaca atctttctgg ctcccttctt aactcttggg  
120

gtgggaattc caagaatggc ttcttttaggc ttcaaaattt gatcctagat cataactttt  
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tcactgggtga cgttcctgct tctttgggta gcttaagaga gctcaatgag atttccctta  
240

gtcataataa gtttaatgga gctgtaccaa atgaaatagg aaccctttct aggccttaaga  
300

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600

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tcatttgtgg gaaatattca actatgtggg acagncttc aaccccatgt ttnccaagc  
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<210> 94

<211> 741

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 94

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tctctcactt ttctttctct tcaaaataac aatctttctg gctcccttcc taactcttgg  
120

ggtgggaatt ccaagaatgg cttcttttagg cttcaaaatt tgatcctaga tcataacttt  
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ttcactgggtg acgttctgc ttctttgggt agcttaagag agctcaatga gatttccctt  
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acacttgaca tttctaataa tgccttgaat gggaacttgc ctgctaccct ctctaattta  
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tctcactta cactgctgaa tgcagagaac aacctccttg acaatcaaatt cctcaaagt  
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ttaggtagat tgcgtaatct ttctgttctg attttgagta gaaaccaatt tagtggacat  
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gttcctacaa taagcctctc anggtctgnc cccctctgc ttgncaagaa aattaactca  
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ctccatacan gagcatggcc cnt  
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<210> 96

<211> 742

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

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tctctcactt ttctttctct tcaaaataac aatctttctg gctcccttcc taactcttgg  
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ggtgggaatt ccaagaatgg cttcttttagg cttcaaaatt tgatcctaga tcataacttt  
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ttaggtagat tgcgtaatct ttctgttctg attttgagta gaaaccaatt tagtggacat  
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attccttcaa gcattgcaaa catttcctcg cttaggcagc ttgatttgtc actgaataat  
540

ttcaggggga gaaattccag tctcctttga cagtcagcgc aagtctaaat ctcttcaatg  
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gttcctacaa tagcctctca nggtctgncc cccctctgct tgncaagaaa ttaactcaag  
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ctcatttggtg ggaaatatcc aactatgnng gacaggcctt caacccatgt ttttccaagc  
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ttcatacaag gagtaatggc ct  
742

<210> 97

<211> 716



<212> DNA  
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 caacagctga gatcatggga aagagcacct atggaactgt ttataaggct attttggagg  
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 ntgggccacn anggnnnnaa aannncacaa ananttggnc cngnggnttn gnnntgcctt  
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 716

<210> 98  
 <211> 616  
 <212> DNA  
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 gagggaaact agtccatttt gatggaccaa tggcttttac agctgatgat ctcttggtg  
 120

caacagctga gatcatggga aagagcacct atggaactgt ttataaggct attttggagg  
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atggaagtca agttgcagta aagagattga gggaaaagat cactaaagggt catagagaat  
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ttgaatcaga agtcagtgtt ctaggaaaaa ttagacaccc caatgttttg gctctgaggg  
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cctattactt gggacccaaa ggggaaaagc ttctggtttt tgattacatg tctaaaggaa  
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gtcttgcttc tttcctacat ggtaagtttc gtgtgctgtt ctttcattaa gtgttggtgtg  
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tgctgttctt taattataat ttggagnttt accttagtaa tctgtataat tctaatacga  
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gaacagtcaa acaaaacacc taaggaacaa caccttagct ttaatatcca tatcaataag  
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tgaatatttt cttggtcac c ttgatgcagg ngngngaact tgaacaatca ttgattggnc  
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caccanggat gaaaat  
616

<210> 99

<211> 532

<212> DNA

<213> soybean

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<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 99

actggctgtg actgatctct ctggtctaata ctcttccagc tgctggagaa cttgatgaac  
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ccactcctct ttgacaactg aggcaacca ctgaggcaaa tctagtccat tcatagacac  
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cccaggtgat ttctcgtta ggagttctaa caagataaca ccaagactgt agatatcagt  
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tttagtgttt gctttcttga gctttgagag ctcaggtgcc cggtatccca atgctccagc  
360

tgtagctatc acgttggaat tagcagcagt tgacatcaac cgagaaagac caaaatctgc  
420

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aatttttagca tttgtattct catcaagcaa cacattgctg gatgtgaggt tcccatgtat  
480

gatgttctcc tgggaatgaa ggcggaacaa gccacgggcc aagtcttgct ct  
532

<210> 100

<211> 568

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 100

tatgaggaca gaaanttnag tccctccagt tgctgggtggt gatgttgaag caggtgggga  
60

ggctggaggg aaactagtcc attttgatgg accaatggct tttacagctg atgatctctt  
120

gtgtgcaaca gctgagatca tgggaaagag cacctatgga actgtttata aggctatatt  
180

ggaggatgga agtcaagttg cagtaaagag attgagggaa aagatcacta aaggatcatag  
240

agaatttgaa tcagaagtca gtgttctagg aaaaattaga caccccaatg ttttggctct  
300

gagggcctat tacttgggac ccaaagggga aaagcttctg gtttttgatt acatgtctaa  
360

aggaagtctt gcttctttcc tacatggtaa gtttcgtgtg ctgttctttc attaagtgtt  
420

gtgtgtgctg ttctttaatt ataatttga gttttacctt agtaatctgt ataattctaa  
480

tcggagaaca gtcaaacaaa aaccctaagg aacacacctt actttaatat accatatcaa  
540

taagngaatn atttcttggt catcttga  
568

<210> 101

<211> 678

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 101

gggtgggactg gctgtgactg atctctctgg tctaactctt tccagctgct ggagaacttg  
60

agacaccccca ggtgatttcc tcgttaggag ttctaacaag ataacaccaa gactgtagat  
300

atcagtttta gtgtttgctt tcttgagctt tgagagctca ggtgcccggg atcccaatgc  
360

tccagctgta gctatcacgt tggaattagc agcagttgac atcaaccgag aaagaccaa  
420

atctgcaatt ttagcatttg tattctcatc aagcaacaca ttgctggatg tgagggtccc  
480

atgtatgatg ttctcctggg aatgaaggca gaacaagcca cggccaagtc ttngngctatt  
540

ttcatccttg ttggccaatc aatgaatggg tcaagttccc cacctgcac cagatgaaca  
600

agaaaataat tcacttaatg gatatggnat attaaagcta aggggtgggc cntaggggtt  
660

ttgggttgnc cng  
673

<210> 103

<211> 665

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 103

ggtgggactg gctgtgactg atctctctgg tctaattctt tccagctgct ggagaacttg  
60

atgaacttct ggtcgtgctg atggagaagg atcaacacag tgcaaagcga gcttcaacgt  
120

gtttagcaac tcgtcgccaa ctgtggatgc atctctcatc aagtctgcat caaaaacctc  
180

atttgtccac tcctctttga caactgaggc aaccactga ggcaaatacta gtccattcat  
240

agacacccca ggtgatttcc tcgttaggag ttctaacaag ataacaccaa gactgtagat  
300

atcagtttta gtgtttgctt tcttgagctt tgagagctca ggtgcccggg atcccaatgc  
360

tccagctgta gctatcacgt tggaattagc agcagttgac atcaaccgag aaagaccaa  
420

atctgcaatt ttagcatttg tattctcatc aagcaacaca ttgctggatg tgagggtccc  
480

atgtatgatg tctnctggga atgaaggcan aacaagccac ggccaagtct tgggctattt  
540

tcaccccttgt ggncaatcaa tgaatgggta anttcccccc ctgcttcaag atgaacaaga  
600

aaataattca cttattgggtt gggntatnaa actaaggggn gncctagggt gnttngntgn  
660

ccnct  
665

<210> 104

<211> 671

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 104

ggtgggactg gctgtgactg atctctcttg tctaattctt tccagctgct ggagaacttg  
60

atgaacttct ggtcgtgctg atggagaagg atcaacacag tgcaaagcga gcttcaacgt  
120

gtttagcaac tcgtcgccaa ctgtggatgc atctctcatc aagtctgcat caaaaacctc  
180

atttgtccac tcctctttga caactgaggc aaccactga ggcaaatacta gtccattcat  
240

agacacccca ggtgatttcc tcgttaggag ttctaacaag ataacaccaa gactgtagat  
300

atcagtttta gtgtttgctt tcttgagctt tgagagctca ggtgcccggg atcccaatgc  
360

tccagctgta gctatcacgt tggaattagc agcagttgac atcaaccgag aaagacaaaa  
420

atctgcaatt ttagcatttg tattctcatc aagcaacaca ttgctggatg tgagggtccc  
480

atgtatgatg ttctcctggg aatgaaggca gaacaagcca cggccaagtc ttngtctatt  
540

ttcatccttg gtggccaatc aatgaatggt tcagttccac cacctgcac aagatgaaca  
600

agaaaataat tcacttattg atatgggata ttaaagctaa ggggtgggtc ntaggggggtt  
660

tngntgncc c  
671

<210> 105

<211> 670

<212> DNA  
 <213> soybean  
 <220>  
 <221> misc\_feature  
 <223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
 <400> 105  
 ggtgggactg gctgtgactg atctctctgg tctaattctt tccagctgct ggagaacttg  
 60  
  
 atgaacttct ggtcgtgctg atggagaagg atcaacacag tgcaaagcga gcttcaacgt  
 120  
  
 gtttagcaac tcgtcgccaa ctgtggatgc atctctcatc aagtctgcat caaaaacctc  
 180  
  
 atttgccac tcctctttga caactgaggc aaccactga ggcaaattcta gtccattcat  
 240  
  
 agacacccca ggtgatttcc tcgttaggag ttctaacaag ataacaccaa gactgtagat  
 300  
  
 atcagtttta gtgtttgctt tcttgagctt tgagagctca ggtgcccggt atcccaatgc  
 360  
  
 tccagctgta gctatcacgt tggaattagc agcagttgac atcaaccgag aaagaccaa  
 420  
  
 atctgcaatt ttagcatttg tantctcatc aagcaacaca ttgctggatg tgagggtccc  
 480  
  
 atgtatgatg tcctcctggg aatgaaggca gaacaagcca cgggccaaagt cttgggctat  
 540  
  
 tttcatcctt ggtggggccaa tcaatgaatg gttcaanttc ancacctgcn tcaagangaa  
 600  
  
 caagaaaata attncntatg gnnnggatat naaactaagg ggnggnccta ggggtntngn  
 660  
  
 nngnccggcn  
 670

<210> 106  
 <211> 662  
 <212> DNA  
 <213> soybean  
 <220>  
 <221> misc\_feature  
 <223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)  
 <400> 106  
 ggtgggactg gctgtgactg atctctctgg tctaattctt tccagctgct ggagaacttg  
 60  
  
 atgaacttct ggtcgtgctg atggagaagg atcaacacag tgcaaagcga gcttcaacgt  
 120

ttgnttataa actactacta aatgagatga gactttaagg ng tactgaag caatatcatt  
360



taaaaaatga ctactcgcat ttgngttgag aaaatttatt ttcataaag naaattttnt  
420

ccnttttang ataaagccat ttnncttaac cnnangggga nataaaatgg ccccnttca  
480

taaaaaacct accanctata taaatggatn tataccaacc ttcctangca ccatgccatt  
540

gggatnggng gaattaaatt naaaangntt gcnttggaat gggtaaaaaa ttccaaaact  
600

tnaaccnccn ccacaatttt agtggccacn gnaatattnn ttanccgntg gncttttttc  
660

caggaaaacg acccgtaacc aaangggggn aaaagggaaa gggagatgga ttgcntgnng  
720

gtntgaggct catcccnatt cccaaacatg ttnggggnccc aaaaccgaag tncccttgga  
780

ccatggatgn cn  
792

<210> 108

<211> 573

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 108

gggactggct gtgactgatc tctctggtct aatctcttcc agctgctgga gaacttgatg  
60

aacttctggt cgtgctgatg gagaaggatc aacacagtgc aaagcgagct tcaacgtgtt  
120

tagcaactcg tcgccaactg tggatgcac tctcatcaag tctgcatcaa aaacctcatt  
180

tgtccactcc tctttgacaa ctgagggaac ccactgaggc aaatctagtc cattcataga  
240

cacccaggt gatttctctg ttaggagttc taacaagata acaccaagac tgtagatata  
300

agtttttagtg tttgctttct tgagctttga gagctcaggt gcccggtatc caatgctcca  
360

gctgtagcta tcacgttgga attagcagca gttgacatca acccgagaaa gacccaaatt  
420

gcaatttagc anttgnattc ttatnaacaa cacaatgggt ggatgngang gtnccaagga  
480

ttgangtttt ctgggaatga aaggganaaa caagccccgg gccaaagntt ggggttattt  
540

tnaancctgg ngggncaaan aaangaaagg ttn  
573

<210> 109

<211> 673

<212> DNA

<213> soybean

<220>

<221> misc\_feature

<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)

<400> 109

gggactggct gtgactgac tctctgggtct aatctcttcc agctgctgga gaacttgatg  
60

aacttctggt cgtgctgatg gagaaggatc aacacagtgc aaagcgagct tcaacgtggt  
120

tagcaactcg tcgccaactg tggatgcatc tctcatcaag tctgcatcaa aaacctcatt  
180

tgtccactcc tctttgacaa ctgaggcaac ccactgaggc aaatctagtc cattcataga  
240

caccccaggt gatttcctcg ttaggagttc taacaagata acaccaagac tgtagatata  
300

agtttttagtg tttgctttct tgagcttttg agaagctcag gtgcccggta tcccaaattgc  
360

ttccagctgt agcttatcac cgttgggaat taagcagcaa gttggacatt caacccggag  
420

naaaagaccc aaaaattttg caaattttta agcaatttng gnanttcttn aatcaaggcc  
480

aaccaccaat tggnttggga atggtggaag ggtttcccca atggtaattg gaagggtttc  
540

ttccctnngg gaaaatggaa aggggcaana aaacaaaggc ccaacngggg ccccaaagg  
600

nttttggggg cttatttttt tncnaatncc ctttggnnng ggncccaaatt tcnaaantgg  
660

aaattggntt tnn  
673

<210> 110

<211> 564

<212> DNA

<213> soybean

<220>

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<221> misc_feature
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)
<400> 110
actggctgtg actgatctct ctggttcta ctcttccagc tgctggagaa cttgatgaac
60

ttctggctgt gctgatggag aaggatcaac acagtgcaaa gcgagcttca acgtgttttag
120

caactcgtcg ccaactgtgg atgcatctct catcaagtct gcatcaaaaa ctcatttgtt
180

ccactcctct ttgacaactg aggcaaccca ctgaggcaaa tctagtccat tcatagacac
240

cccaggtgat ttctctgtta ggagttctaa caagataaca ccaagactgt agatatcagt
300

ttagtggtt gctttcttga gctttgagag ctcaggtgcc cggtatccca atgctccagc
360

tgtagctatc acgttggaat tagcagcagt tgacatcaac ccgagaaaga ccaaaatctg
420

caatttttagc atttgtattc tcatcaagca acacattgct ggatgtgagg ttcccatgta
480

tgatgttctc ctgggaatga aggcagaaca agccacggcc aagcttggct atttcactct
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tgtggccaat caatgaatgg tcat
564

<210> 111
<211> 456
<212> DNA
<213> soybean
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<221> misc_feature
<223> n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP)
<400> 111
actatgagga cagaaaaagg agtccctcca gttgctggtg gtgatgttga agcgggtggg
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gaggctggag ggaaactagt ccattttgat ggaccaatgg cttttacagc tgatgatctc
120

ttgtgtgcaa cagctgagat catgggaaag agcacctatg gaactgttta taaggctatt
180

ttggaggatg gaagtcaagt tgcagtaaag agattgaggg aaaagatcac taaaggctcat
240

agagaatttg aatcanaagt cagtgttcta ggaaaaatta nacaccccaa tgttttgggt
300

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gngngctgnn ttttaattata attnggngtt tacctt  
456

actatgagga cagaaaaagg agtccctcca gttgctggtg gtgatgttga agcaggtggg  
60

ttgtgtgcaa cagctgagat catgggaaaag agcacctatg gaactgttta taaggctatt  
180

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300

ctgagggcct attacttggg acccaaaggg gaaaagcttc tggtttttga ttacatgtct  
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aaaggaagtc ttgcttcttt cctacatggt aagtttcgtg tgctgttctt tcattaagtg  
420

ttgggtgtgc tggctcttaa ttataatttg gagtttacct tannaatctg gataattcta  
480

atcggagaac agncaaaca aancctaag gaacaacct tanccttaat atccatatca  
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592

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120

tagcaactcg tcgccaactg tggatgcac tctcatcaag tctgcatcaa aaacctcatt  
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tgtccactcc tctttgacaa ctgaggcaac ccactgaggc aaatctagtc cattcataga  
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caccccaggt gatttcctcg ttaggagttc taacaagata acaccaagac tgtagatata  
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agtttttagtg tttgctttct tgagctttga gagctcaggt gcccggtatc ccaatgcttc  
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agctgtagct atcacgttgg aattagcagc agttgacatc aaccgagaaa gacaaaaatc  
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<213> soybean

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tagcaactcg tcgccaactg tggatgcac tctcatcaag tctgcatcaa aaacctcatt  
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tgtccactcc tctttgacaa ctgaggcaac ccactgaggc aaatctagtc cattcataga  
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agtttttagtg tttgctttct tgagctttga gagttaaggg ncccggantc ccannntcn  
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agttgnagtt atancgttgg aattagcagn agttgcntca accgaaaaag accaaaaatc  
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gaatttttagc atttgttttt catcaagcaa cacattgntg gatgngaggt cccatgtatg  
480

114 566 DNA soybean misc\_feature n is an undetermined nucleotide (dATP, dCTP, dGTP, or dTTP) 114

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attggtttct actcaaaatc agaacagaaa gattacgcaa tctacctaaa ctttgagggga
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240
gggtagcagg ca
252
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